



SEQUENCE LISTING

RECEIVED
MAR 11 2003
TECH CENTER 1600/2900

<110> Prayaga, Sudhirdas K
Shimkets, Richard A
Majumder, Kumud
Eisen, Andrew
Vernet, Corine
Spaderna, Steven K
Baumgartner, Jason
Gorman, Linda
Gusev, Vladimir
Padigaru, Muralidhara
Patturajan, Meera
Tchernev, Velizar
Li, Li

B'
<120> ENDOZEPINE-LIKE POLYPEPTIDES AND POLYNUCLEOTIDES
ENCODING SAME

<130> 15966-575CIP

<140> 10/083,919

<141> 2002-02-27

<150> 60/157,786

<151> 1999-10-05

<150> 60/164,164

<151> 1999-11-09

<150> 60/174,505

<151> 2000-01-04

<150> 60/183,859

<151> 2000-02-22

<150> 60/190,740

<151> 2000-03-20

<150> 60/191,133

<151> 2000-03-22

<150> 60/206,006

<151> 2000-05-19

<150> 60/215,684

<151> 2000-06-30

<150> 60/219,490

<151> 2000-07-20

<150> 60/227,072

<151> 2000-08-22

<150> 09/679,460

<151> 2000-10-04

<150> 09/679,740

<151> 2000-10-05

<150> 60/271,909

<151> 2001-02-27

<160> 202

<170> PatentIn Ver. 2.1

<210> 1

<211> 318

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (95)

<223> wherein n is a g or t

<400> 1

gatcgagtag taacagccac tccaactctc cacctccagc ttctagcacc agggaccgcc 60
tccaccaccc catgtgccaa gtggagtctg agctntgcgg ccctcaagca gctgaagggt 120
cccgtgagcg atcaggagaa gctgctggtc tacggcttgt acaaacaggc caccacagggc 180
gactgcgaca tccccggccc tccggcctca gacgtgagag ccagggccaa gtgggagggt 240
tggagcgcg acaaaggggc gtccaagatg gacgccatga ggggctacgc ggccaaagtg 300
gaggagctga cgaagaag 318

<210> 2

<211> 107

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (32)

<223> wherein Xaa is any amino acid

<400> 2

Asp Arg Val Val Thr Ala Thr Pro Thr Leu His Leu Gln Leu Leu Ala

1

5

10

15

Pro Gly Thr Ala Ser Thr Thr Pro Cys Ala Lys Trp Ser Ser Ser Xaa

20

25

30

Ala Ala Leu Lys Gln Leu Lys Gly Pro Val Ser Asp Gln Glu Lys Leu

35

40

45

Leu Val Tyr Gly Leu Tyr Lys Gln Ala Thr Gln Gly Asp Cys Asp Ile

50

55

60

Pro Gly Pro Pro Ala Ser Asp Val Arg Ala Arg Ala Lys Trp Glu Ala

65

70

75

80

Trp Ser Ala Asn Lys Gly Ala Ser Lys Met Asp Ala Met Arg Gly Tyr

85

90

95

Ala Ala Lys Val Glu Glu Leu Thr Lys Lys Glu

100

105

<210> 3

<211> 351

<212> DNA

<213> Homo sapiens

<400> 3

gtataagaca tacagaagga atgcctggag agcagcaaca gccagctgc ggccaccatg 60
tccctgcagg ctgattttga catggtcaca gaagatgtga ggaagctgaa aacaagacca 120
gatgatgaag aactgaaaga actttatggg ctttacaac aagctgtaat tggaaacatt 180
aatattgagt gttcagaaat gctagaatta aaaggcaagg ccaaattggga agcacagaac 240
ccccaaaaag gattgtcaga ggaagatatg atgcgtgcct ttatttctaa agccgaagag 300
ctgatagaaa aatatggaat ttagaataaa gcatatgata aattttcctt t 351

<210> 4

<211> 88

<212> PRT

<213> Homo sapiens

<400> 4

Met Ser Leu Gln Ala Asp Phe Asp Met Val Thr Glu Asp Val Arg Lys

1

5

10

15

Leu Lys Thr Arg Pro Asp Asp Glu Glu Leu Lys Glu Leu Tyr Gly Leu

20

25

30

Tyr Lys Gln Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met

35

40

45

Leu Glu Leu Lys Gly Lys Ala Lys Trp Glu Ala Gln Asn Pro Gln Lys

50

55

60

Gly Leu Ser Glu Glu Asp Met Met Arg Ala Phe Ile Ser Lys Ala Glu

65

70

75

80

Glu Leu Ile Glu Lys Tyr Gly Ile

85

<210> 5

<211> 565

<212> DNA

<213> Homo sapiens

<400> 5

gctcacacct gtaatcccag catttgggag gccaaaggcag gcagattatg tgaggtcaag 60
agttccagac cagctgtcca acatggcaaa acccatctcc actaaaaata caaaaattag 120
ccggcatggg tggcatgcag ctgtaatcac agctgctcgg gaggctgagg cggagaatca 180
cttgagctgg gaagaaaaaa aaaaaaaaaa aagatgtgca ggtattaagc actttaagac 240
caagccagca gatgatgaga tgcgggttcct ttacggccac tacaacgag cgactgtagg 300
caacataaag acagaacggc cagggatggg ggacttcaag ggcaaagcca agtgggatcc 360
ctggaattta gtgaaagggg ctgccaggga agatcccatg aaagctaaag cttacgtcaa 420
aaaagtagaa gagttaaaga aaaaattcag aatacgagag actggaattg ttgccagcca 480
tgcccttgtc ctaaactgag acaatgcctt gttttttcta cactgtggat ggtgggaact 540

gatggaaaga atcagctaac ccatc

565

<210> 6

<211> 138

<212> PRT

<213> Homo sapiens

<400> 6

Met Ala Lys Pro Ile Ser Thr Lys Asn Thr Lys Ile Ser Arg His Gly

1 5 10 15

Trp His Ala Ala Val Ile Thr Ala Ala Arg Glu Ala Glu Ala Glu Asn

20 25 30

His Leu Ser Trp Glu Glu Lys Lys Lys Lys Lys Arg Cys Ala Gly Ile

35 40 45

Lys His Phe Lys Thr Lys Pro Ala Asp Asp Glu Met Arg Phe Leu Tyr

50 55 60

Gly His Tyr Lys Arg Ala Thr Val Gly Asn Ile Lys Thr Glu Arg Pro

65 70 75 80

Gly Met Val Asp Phe Lys Gly Lys Ala Lys Trp Asp Pro Trp Asn Leu

85 90 95

Val Lys Gly Ala Ala Arg Glu Asp Pro Met Lys Ala Lys Ala Tyr Val

100 105 110

Lys Lys Val Glu Glu Leu Lys Lys Lys Phe Arg Ile Arg Glu Thr Gly

115

120

125

Ile Val Ala Ser His Ala Phe Val Leu Asn

130

135

<210> 7

<211> 310

<212> DNA

<213> Homo sapiens

<400> 7

ttggtggtaa atgctccttt tgtttgtttg tttgttcttc cttaaggctg attttgacag 60
ggctgcagaa gatgtgagga agctgaaagc aagaccagat gatggagaac tgaaagaact 120
ctatgggctt tacaacaag caatagttagg agacattaat attgcgtgct caggaatgct 180
agatttaaaa ggcaaagcca aatgggaagc atggaacctc aaaaaagggt tgtcgacgga 240
agatgcgacg agtgcctata tttctaaagc aaaggagctg atagaaaaat acggaattta 300
gaatacagca 310

<210> 8

<211> 96

<212> PRT

<213> Homo sapiens

<400> 8

Met Leu Leu Leu Phe Val Cys Leu Phe Phe Leu Lys Ala Asp Phe Asp

1

5

10

15

Arg Ala Ala Glu Asp Val Arg Lys Leu Lys Ala Arg Pro Asp Asp Gly

20

25

30

Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys Gln Ala Ile Val Gly Asp

35

40

45

Ile Asn Ile Ala Cys Pro Gly Met Leu Asp Leu Lys Gly Lys Ala Lys

50

55

60

Trp Glu Ala Trp Asn Leu Lys Lys Gly Leu Ser Thr Glu Asp Ala Thr

65

70

75

80

Ser Ala Tyr Ile Ser Lys Ala Lys Glu Leu Ile Glu Lys Tyr Gly Ile

85

90

95

<210> 9

<211> 280

<212> DNA

<213> Homo sapiens

<400> 9

accaccatgg cactgcaggc tgaattcgac aaggctgcag aagacgtgag gaagctgccca 60

acaagaccag cagataataa agaactgaaa aaactcgatg gactttacaa acaagctata 120
attggagaca ttaatatattga gtatctggga atgctggact ttaagggcaa ggccaaatgc 180
gcagcatgga ccctccaaaa aagggtgtca aaggaagatg caacgagtgt ctctatttct 240
aaggcaaaag agccgataga aaaataggac atttagaata 280

<210> 10

<211> 86

<212> PRT

<213> Homo sapiens

<400> 10

Met Ala Leu Gln Ala Glu Phe Asp Lys Ala Ala Glu Asp Val Arg Lys

1 5 10 15

Leu Pro Thr Arg Pro Ala Asp Asn Lys Glu Leu Lys Lys Leu Asp Gly

20 25 30

Leu Tyr Lys Gln Ala Ile Ile Gly Asp Ile Asn Ile Glu Tyr Leu Gly

35 40 45

Met Leu Asp Phe Lys Gly Lys Ala Lys Cys Ala Ala Trp Thr Leu Gln

50 55 60

Lys Arg Leu Ser Lys Glu Asp Ala Thr Ser Val Ser Ile Ser Lys Ala

65 70 75 80

Lys Glu Pro Ile Glu Lys

85

<210> 11

<211> 267

<212> DNA

<213> Homo sapiens

<400> 11

accgcctcca ccaccccatg tgccaagtgg agttcgagct gcgcggccct caagcagctg 60
aaggggtcccg tgagcgatca ggagaagctg ctgggtctacg gcttgtacaa acagggccacc 120
cagggcgact gcgacatccc cggccctccg gcctcagacg tgagagccag ggccaagtgg 180
gaggcttgga gcgcgaacaa aggggcgctcc aagatggacg ccatgagggg ctacgcggcc 240
aaagtggagg agctgacgaa gaaggaa 267

<210> 12

<211> 89

<212> PRT

<213> Homo sapiens

<400> 12

Thr Ala Ser Thr Thr Pro Cys Ala Lys Trp Ser Ser Ser Cys Ala Ala

1

5

10

15

Leu Lys Gln Leu Lys Gly Pro Val Ser Asp Gln Glu Lys Leu Leu Val

20

25

30

Tyr Gly Leu Tyr Lys Gln Ala Thr Gln Gly Asp Cys Asp Ile Pro Gly

35

40

45

Pro Pro Ala Ser Asp Val Arg Ala Arg Ala Lys Trp Glu Ala Trp Ser

50

55

60

Ala Asn Lys Gly Ala Ser Lys Met Asp Ala Met Arg Gly Tyr Ala Ala

65

70

75

80

Lys Val Glu Glu Leu Thr Lys Lys Glu

85

<210> 13

<211> 481

<212> DNA

<213> Homo sapiens

<400> 13

tcttcttcgt cagctcctcc actttggccg cgtagcccct catggcgtcc atcttggacg 60
cccttttgtt cgcgctccaa gcctcccact tggccctggc tctcacgtct gaggccggag 120
ggccggggat gtcgcagtcg ccttgggtgg cctgtttgta caagccgtag accagcagct 180
tctcctgata gctcacggga cccttcagct gcttgagggc cgcaaagctc gaactccact 240
tggcacatgg ggtggtggag gcggtccctg gtgctagaag ctggaggtgg agagtggag 300
tggctgttac tactcgatct cagggggagg agacaggcac gcgatgtttg tgttttgtca 360
agcacagatt gcaagctcgg ggtccagcgt aaacccacc atgtttgggc tcacacggcg 420
cattttctgg ggaggaccag ccgtcaaaaa gcgtctagga tccggaacgc tgctgtctgg 480
a 481

<210> 14

<211> 273

<212> DNA

<213> Homo sapiens

<400> 14

gcgtccatct tggacgcccc ttgttcgcg ctccaagcct cccacttggc cctggctctc 60
acgtctgagg ccggagggcc ggggatgtcg cagtcgccct gggtaggctg ttgtacaag 120
ccgtagacca gcagcttctc ctgatcgctc acgggaccct tcagctgctt gagggccgcg 180
cagctcgaac tccacttggc acatgggggtg gtggaggcgg tccctgggtgc tagaagctgg 240
aggtggagag ttggagtggc tgttactact cgc 273

<210> 15

<211> 20

<212> PRT

<213> Homo sapiens

<400> 15

Gln Ala Thr Gln Gly Asp Cys Asp Ile Pro Gly Pro Pro Ala Ser Asp

1

5

10

15

Val Arg Ala Arg

20

<210> 16

<211> 20

<212> PRT

<213> Homo sapiens

<400> 16

Gln Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met Leu Glu

1

5

10

15

Leu Lys Gly Lys

20

<210> 17

<211> 20

<212> PRT

<213> Homo sapiens

<400> 17

Arg Ala Thr Val Gly Asn Ile Lys Thr Glu Arg Pro Gly Met Val Asp

1

5

10

15

Phe Lys Gly Lys

20

<210> 18

<211> 18

<212> PRT

<213> Homo sapiens

<400> 18

Arg Ala Thr Val Gly Asn Ile Lys Thr Glu Arg Pro Gly Met Val Asp

1 5 10 15

Phe Lys

<210> 19

<211> 20

<212> PRT

<213> Homo sapiens

<400> 19

Gln Ala Ile Val Gly Asp Ile Asn Ile Ala Cys Pro Gly Met Leu Asp

1 5 10 15

Leu Lys Gly Lys

20

<210> 20

<211> 18

<212> PRT

<213> Homo sapiens

<400> 20

Gln Ala Ile Val Gly Asp Ile Asn Ile Ala Cys Pro Gly Met Leu Asp

1 5 10 15

Leu Lys

<210> 21

<211> 20

<212> PRT

<213> Homo sapiens

<400> 21

Gln Ala Ile Ile Gly Asp Ile Asn Ile Glu Tyr Leu Gly Met Leu Asp

1

5

10

15

Phe Lys Gly Lys

20

<210> 22

<211> 1593

<212> DNA

<213> Homo sapiens

<400> 22

atgttccagt ttcattgcagg ctcttgggaa agctggtgct gctgctgcct gattccccgcc 60
gacagacctt gggaccgggg ccaacactgg cagctggaga tggcggacac gagatccgtg 120
cacgagacta ggtttgaggg ggccgtgaag gtgatccaga gtttgccgaa gaatggttca 180
ttccagccaa caaatgaaat gatgcttaaa ttttatagct tctataagca ggcaactgaa 240

ggaccctgta aactttcaag gcctggattt tgggataccta ttggaagata taaatgggat 300
 gcttggagtt cactgggtga tatgaccaa gaggaagcca tgattgcata tgttgaagaa 360
 atgaaaaaga ttattgaaac tatgccaatg actgagaaag ttgaagaatt gctgcgtgtc 420
 ataggtccat tttatgaaat tgtcaggagc aaaaagagtgc gcaggagttc tgatataacc 480
 tcagtccgac tggagaaaaat ctctaaatgt ttagaagatc ttggtaaatgt tctcacttct 540
 actccaaacg ccaaaaccgt taatggtaaa gctgaaagca gtgacagtgg agcggagtct 600
 gaggaagaag aggcccaaga agaagtgaag ggagcagaac acagtataa tgataagaaa 660
 atgatgaaga agtcagcaga ccataagaat ttggaagtca ttgtcactaa tggctatgat 720
 aaagatggct ttgttcagga tatacagaat gacattcatg ccagttcttc cctgaatggc 780
 agaagcactg aagaagtaaa gccattgat gaaaacttgg ggcaaactgg aaaatctgct 840
 gtttgcattc accaaggtat taatgatgat catgttgaag atgttacagg aattcagcat 900
 ttgacaagcg attcagacag tgaagtttac tgtgattcta tggaacaatt tggacaagaa 960
 gagtctttag acagctttac gtccaacaat ggaccatttc agtattactt ggggtggcat 1020
 tccagtcaac ccatggaaaa ttctggattt cgtgaagata ttcaagtacc tcctggaaat 1080
 ggcaacattg ggaatatgca ggtggttgca gttgaaggaa aagggtgaagt caagcatgga 1140
 ggagaagatg gcaggaataa cagcggagca ccacaccggg agaagcgagg cggagaaact 1200
 gacgaattct ctaatgttag aagaggaaga ggtcatagga tgcaacactt gagcgaagga 1260
 accaagggcc ggcaggtggg aagtggaggt gatggggagc gctggggctc cgacagaggg 1320
 tcccagggca gcctcaatga gcagatcgcc ctctgtctga tgagactgca ggaggacatg 1380
 cagaatgtcc ttcagagact gcagaaactg gaaacgctga ctgctgcaa atcatcaaca 1440
 tcaacattgc agactgtcc tcagcccacc tcatctcaga gaccatcttg gtggcccttc 1500
 gagatgtctc ctggtgtgct aacgtttgcc atcatatggc cttttattgc acagtgggtg 1560
 gtgtatttat actatcaaag aaggagaagg taa 1593

<210> 23

<211> 530

<212> PRT

<213> Homo sapiens

<400> 23

Met Phe Gln Phe His Ala Gly Ser Trp Glu Ser Trp Cys Cys Cys Cys

1 5 10 15

Leu Ile Pro Ala Asp Arg Pro Trp Asp Arg Gly Gln His Trp Gln Leu

20 25 30

Glu Met Ala Asp Thr Arg Ser Val His Glu Thr Arg Phe Glu Ala Ala

35 40 45

Val Lys Val Ile Gln Ser Leu Pro Lys Asn Gly Ser Phe Gln Pro Thr

50 55 60

Asn Glu Met Met Leu Lys Phe Tyr Ser Phe Tyr Lys Gln Ala Thr Glu

65 70 75 80

Gly Pro Cys Lys Leu Ser Arg Pro Gly Phe Trp Asp Pro Ile Gly Arg

85 90 95

Tyr Lys Trp Asp Ala Trp Ser Ser Leu Gly Asp Met Thr Lys Glu Glu

100 105 110

Ala Met Ile Ala Tyr Val Glu Glu Met Lys Lys Ile Ile Glu Thr Met

115 120 125

Pro Met Thr Glu Lys Val Glu Glu Leu Leu Arg Val Ile Gly Pro Phe

130 135 140

Tyr Glu Ile Val Glu Asp Lys Lys Ser Gly Arg Ser Ser Asp Ile Thr
145 150 155 160

Ser Val Arg Leu Glu Lys Ile Ser Lys Cys Leu Glu Asp Leu Gly Asn
165 170 175

Val Leu Thr Ser Thr Pro Asn Ala Lys Thr Val Asn Gly Lys Ala Glu
180 185 190

Ser Ser Asp Ser Gly Ala Glu Ser Glu Glu Glu Glu Ala Gln Glu Glu
195 200 205

Val Lys Gly Ala Glu His Ser Asp Asn Asp Lys Lys Met Met Lys Lys
210 215 220

Ser Ala Asp His Lys Asn Leu Glu Val Ile Val Thr Asn Gly Tyr Asp
225 230 235 240

Lys Asp Gly Phe Val Gln Asp Ile Gln Asn Asp Ile His Ala Ser Ser
245 250 255

Ser Leu Asn Gly Arg Ser Thr Glu Glu Val Lys Pro Ile Asp Glu Asn
260 265 270

Leu Gly Gln Thr Gly Lys Ser Ala Val Cys Ile His Gln Gly Ile Asn
275 280 285

Asp Asp His Val Glu Asp Val Thr Gly Ile Gln His Leu Thr Ser Asp

290

295

300

Ser Asp Ser Glu Val Tyr Cys Asp Ser Met Glu Gln Phe Gly Gln Glu

305

310

315

320

Glu Ser Leu Asp Ser Phe Thr Ser Asn Asn Gly Pro Phe Gln Tyr Tyr

325

330

335

Leu Gly Gly His Ser Ser Gln Pro Met Glu Asn Ser Gly Phe Arg Glu

340

345

350

Asp Ile Gln Val Pro Pro Gly Asn Gly Asn Ile Gly Asn Met Gln Val

355

360

365

Val Ala Val Glu Gly Lys Gly Glu Val Lys His Gly Gly Glu Asp Gly

370

375

380

Arg Asn Asn Ser Gly Ala Pro His Arg Glu Lys Arg Gly Gly Glu Thr

385

390

395

400

Asp Glu Phe Ser Asn Val Arg Arg Gly Arg Gly His Arg Met Gln His

405

410

415

Leu Ser Glu Gly Thr Lys Gly Arg Gln Val Gly Ser Gly Gly Asp Gly

420

425

430

Glu Arg Trp Gly Ser Asp Arg Gly Ser Arg Gly Ser Leu Asn Glu Gln

435

440

445

Ile Ala Leu Val Leu Met Arg Leu Gln Glu Asp Met Gln Asn Val Leu

450

455

460

Gln Arg Leu Gln Lys Leu Glu Thr Leu Thr Ala Ala Lys Ser Ser Thr

465

470

475

480

Ser Thr Leu Gln Thr Ala Pro Gln Pro Thr Ser Ser Gln Arg Pro Ser

485

490

495

Trp Trp Pro Phe Glu Met Ser Pro Gly Val Leu Thr Phe Ala Ile Ile

500

505

510

Trp Pro Phe Ile Ala Gln Trp Leu Val Tyr Leu Tyr Tyr Gln Arg Arg

515

520

525

Arg Arg

530

<210> 24

<211> 17

<212> PRT

<213> Homo sapiens

<400> 24

Gln Ala Thr Glu Gly Pro Cys Lys Leu Ser Arg Pro Gly Phe Trp Asp

1

5

10

15

Pro

<210> 25

<211> 273

<212> DNA

<213> Homo sapiens

<400> 25

ccagtatgtc tcaggcggtt gagaaagctg ccaaggatat taagcacctt gagaccaagc 60
 cagcagatga tgagaggatg ttcattctaca gccgctgcaa acaagcgact gtgcatgact 120
 taaatacaga atggcccagg atgttagacc tcaaaggcaa ggcaaagcag gatgcttgga 180
 atgagctgaa agacactgcc aaggaagatg ctgtgaaagc tgatatcaac aaagtagaag 240
 agcgaaataa aaaatacaga atataagaga ttg 273

<210> 26

<211> 86

<212> PRT

<213> Homo sapiens

<400> 26

Met Ser Gln Ala Phe Glu Lys Ala Ala Lys Asp Ile Lys His Leu Glu

1

5

10

15

Thr Lys Pro Ala Asp Asp Glu Arg Met Phe Ile Tyr Ser Arg Cys Lys

20

25

30

Gln Ala Thr Val His Asp Leu Asn Thr Glu Trp Pro Arg Met Leu Asp

35

40

45

Leu Lys Gly Lys Ala Lys Gln Asp Ala Trp Asn Glu Leu Lys Asp Thr

50

55

60

Ala Lys Glu Asp Ala Val Lys Ala Asp Ile Asn Lys Val Glu Glu Arg

65

70

75

80

Asn Lys Lys Tyr Arg Ile

85

<210> 27

<211> 20

<212> PRT

<213> Homo sapiens

<400> 27

Gln Ala Thr Val His Asp Leu Asn Thr Glu Trp Pro Arg Met Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 28

<211> 315

<212> DNA

<213> Homo sapiens

<400> 28

atgtggggcg acctctggct cctcccgct gcctctgcca atccgggcac tgggacagag 60
gctgagtttg agaaagctgc agaggagggtt aggcacctta agaccaagcc atcggatgag 120
gagatgctgt tcacttatgg ccactacaaa caagcaactg tgggcgacat aaatacagaa 180
cgccccggga tggtggactt cacgggcaag gccaaagtggg atgcctggaa tgagctgaaa 240
gggacttcca aggaagatgc catgaaagct tacatcaaca aagtagaaga gctaaagaaa 300
aaatacggga tatga 315

<210> 29

<211> 104

<212> PRT

<213> Homo sapiens

<400> 29

Met Trp Gly Asp Leu Trp Leu Leu Pro Pro Ala Ser Ala Asn Pro Gly

1 5 10 15

Thr Gly Thr Glu Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His

20 25 30

Leu Lys Thr Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His

35 40 45

Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met

50

55

60

Leu Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys

65

70

75

80

Gly Thr Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu

85

90

95

Glu Leu Lys Lys Lys Tyr Gly Ile

100

<210> 30

<211> 20

<212> PRT

<213> Homo sapiens

<400> 30

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp

1

5

10

15

Phe Thr Gly Lys

20

<210> 31

<211> 1080

<212> DNA

<213> Homo sapiens

<400> 31

atgagagcca gtcagaagga ctttgaaaat tcaatgaatc aagtgaaact cttgaaaaag 60
gatccaggaa acgaagtga gctaaaactc tacgcgctat ataagcaggc cactgaagga 120
ccttgtaaca tgcccaaacc aggtgtatct gacttgatca acaaggccaa atgggacgca 180
tggaatgccc ttggcagcct gcccaaggaa gctgccaggc agaactatgt ggatttggtg 240
tccagtttga gtccttcatt ggaatcctct agtcagggtg agcctggaac agacaggaaa 300
tcaactgggt ttgaaactct ggtggtgacc tccgaagatg gcatcacaaa gatcatgttc 360
aaccggccca aaaagaaaaa tgccataaac actgagatgt atcatgaaat tatgcgtgca 420
cttaaagctg ccagcaagga tgactcaatc atcactgttt taacaggaaa tggtagactat 480
tacagtagtg ggaatgatct gactaacttc actgatattc cccctgggtg agtagaggag 540
aaagctaaaa ataatgccgt tttactgagg gaatttggtg gctgttttat agattttcct 600
aagcctctga ttgcagtggc caatggtcca gctgtgggca tctccgtcac cctccttggg 660
ctattcgatg ccgtgtatgc atctgacagg gcaacatttc atacaccatt tagtcaccta 720
ggccaaagtc cggaaggatg ctctctttac acttttccga agataatgag cccagccaag 780
gcaacagaga tgcttatttt tggaaagaag ttaacagcgg gagaggcatg tgctcaagga 840
cttggtactg aagttttccc tgatagcact tttcagaaag aagtctggac caggctgaag 900
gcatttgcaa agcttcccc aaatgccttg agaatttcaa aagaggtaat caggaaaaga 960
gagagagaaa aactacacgc tgtaaatgct gaagaatgca atgtccttca gggaagatgg 1020
ctatcagatg aatgcacaaa tgctgtggtg aacttcttat ccagaaaatc aaaactgtga 1080

<210> 32

<211> 359

<212> PRT

<213> Homo sapiens

<400> 32

Met Arg Ala Ser Gln Lys Asp Phe Glu Asn Ser Met Asn Gln Val Lys

1 5 10 15

Leu Leu Lys Lys Asp Pro Gly Asn Glu Val Lys Leu Lys Leu Tyr Ala

20 25 30

Leu Tyr Lys Gln Ala Thr Glu Gly Pro Cys Asn Met Pro Lys Pro Gly

35 40 45

Val Phe Asp Leu Ile Asn Lys Ala Lys Trp Asp Ala Trp Asn Ala Leu

50 55 60

Gly Ser Leu Pro Lys Glu Ala Ala Arg Gln Asn Tyr Val Asp Leu Val

65 70 75 80

Ser Ser Leu Ser Pro Ser Leu Glu Ser Ser Ser Gln Val Glu Pro Gly

85 90 95

Thr Asp Arg Lys Ser Thr Gly Phe Glu Thr Leu Val Val Thr Ser Glu

100 105 110

Asp Gly Ile Thr Lys Ile Met Phe Asn Arg Pro Lys Lys Lys Asn Ala

115 120 125

Ile Asn Thr Glu Met Tyr His Glu Ile Met Arg Ala Leu Lys Ala Ala

130 135 140

Ser Lys Asp Asp Ser Ile Ile Thr Val Leu Thr Gly Asn Gly Asp Tyr
145 150 155 160

Tyr Ser Ser Gly Asn Asp Leu Thr Asn Phe Thr Asp Ile Pro Pro Gly
165 170 175

Gly Val Glu Glu Lys Ala Lys Asn Asn Ala Val Leu Leu Arg Glu Phe
180 185 190

Val Gly Cys Phe Ile Asp Phe Pro Lys Pro Leu Ile Ala Val Val Asn
195 200 205

Gly Pro Ala Val Gly Ile Ser Val Thr Leu Leu Gly Leu Phe Asp Ala
210 215 220

Val Tyr Ala Ser Asp Arg Ala Thr Phe His Thr Pro Phe Ser His Leu
225 230 235 240

Gly Gln Ser Pro Glu Gly Cys Ser Ser Tyr Thr Phe Pro Lys Ile Met
245 250 255

Ser Pro Ala Lys Ala Thr Glu Met Leu Ile Phe Gly Lys Lys Leu Thr
260 265 270

Ala Gly Glu Ala Cys Ala Gln Gly Leu Val Thr Glu Val Phe Pro Asp
275 280 285

Ser Thr Phe Gln Lys Glu Val Trp Thr Arg Leu Lys Ala Phe Ala Lys

290

295

300

Leu Pro Pro Asn Ala Leu Arg Ile Ser Lys Glu Val Ile Arg Lys Arg

305

310

315

320

Glu Arg Glu Lys Leu His Ala Val Asn Ala Glu Glu Cys Asn Val Leu

325

330

335

Gln Gly Arg Trp Leu Ser Asp Glu Cys Thr Asn Ala Val Val Asn Phe

340

345

350

Leu Ser Arg Lys Ser Lys Leu

355

<210> 33

<211> 20

<212> PRT

<213> Homo sapiens

<400> 33

Gln Ala Thr Glu Gly Pro Cys Asn Met Pro Lys Pro Gly Val Phe Asp

1

5

10

15

Leu Ile Asn Lys

20

<210> 34

<211> 1574

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (120)..(1574)

<223> wherein any n is an a, c, g or t

<400> 34

tccttcccc acccccgggg gcccatcccg gtggcgggct ccggagctcg ggactgctaa 60
tttcagcgaa acgattaaaa gacgccccta cagctgacgg cactttctct cctccggcag 120
ganaggacgt ccagcgtacg tcngcccgcg cttccccgcc ggcgagagc aggcctcaca 180
gaatcgacg ccgctggcac gcacgccgcc ccgccccac ggcccagcgc cagcgcgcc 240
cgcgtcgcac gcatcccggc ctactgccc ctgactcct gttccgttgg aggggcctga 300
ggcgagcctg agcgcgctgt tggccggagg aagccggaga gaccgggtcg actgggcaga 360
gcggcagagg gtcgaggagc ctgctctgca cgcccaggga gtagaagtgg gcaggagca 420
gggtcacgtg agggagcgcg ccgcgactga gcttgggtcc gactggagct caggctcgcg 480
accagactg gtgggccagg cctccaagcc ggccttacac ccaatccaag gaggacagac 540
cggacacaga gggacggagc gagcaaggag acatggcttc atcattcctg cccgcggggg 600
ccatcacccg cgacagcggg ggagagctga gctcagggga cgactccggg gaggtggagt 660
tccccatag cctgagatc gaggagacca gttgcctggc cgagctgttt gagaaggctg 720
ccgcgcacct gcaaggcctg attcaggtgg ccagcagga gcagctcttg tacctgtatg 780
ccaggtacaa acaggtcaaa gttggaaatt gtaatactcc taaaccaagc ttctttgatt 840
ttgaaggaaa gcaaaaatgg gaagcttggg aagcacttgg tgattcaagc cccagccaag 900
caatgcagga atatatcgca gtagttaaaa aactagatcc aggttggat cctcagatac 960
cagagaagaa aggaaaagaa gcaaatacag gttttggtgg gccagttatt agttctctat 1020

atcatgaaga aaccatcagg gaagaagaca aaaatatatt tgattactgc agggaaaaca 1080
 acattgacca tataaccaa gccatcaaat cgaaaaatgt ggatgtgaat gtgaaagatg 1140
 aagagggtag ggctctactt cactgggcct gtgatcgagg acataaggaa ctagtcacag 1200
 tgttgctgca acatagagct gacattaact gtcaggacaa tgaaggcaa acagctctac 1260
 attatgcttc tgctgtgag tttctggata ttgtagagct gctgctccag tctggtgctg 1320
 accccactct ccgagaccag gatggctgcc tgccagagga ggtgacaggc tgcaaaacag 1380
 tttctttggt gctgcagcgg cacacaactg gcaaggctta atcaaaagac tggaaaactg 1440
 cagtctgtaa tagcataagg cttccattat gaaagaaaac tacaaaaata atacttcttt 1500
 tccaccgctc tttggtatgt attggctaata aaaatcagtt ctgtggaact gggaaaaaaa 1560
 aaaaaaaaaa aaaa 1574

<210> 35

<211> 282

<212> PRT

<213> Homo sapiens

<400> 35

Met Ala Ser Ser Phe Leu Pro Ala Gly Ala Ile Thr Gly Asp Ser Gly

1 5 10 15

Gly Glu Leu Ser Ser Gly Asp Asp Ser Gly Glu Val Glu Phe Pro His

20 25 30

Ser Pro Glu Ile Glu Glu Thr Ser Cys Leu Ala Glu Leu Phe Glu Lys

35 40 45

Ala Ala Ala His Leu Gln Gly Leu Ile Gln Val Ala Ser Arg Glu Gln

50 55 60

Leu Leu Tyr Leu Tyr Ala Arg Tyr Lys Gln Val Lys Val Gly Asn Cys
 65 70 75 80

Asn Thr Pro Lys Pro Ser Phe Phe Asp Phe Glu Gly Lys Gln Lys Trp
 85 90 95

Glu Ala Trp Lys Ala Leu Gly Asp Ser Ser Pro Ser Gln Ala Met Gln
 100 105 110

Glu Tyr Ile Ala Val Val Lys Lys Leu Asp Pro Gly Trp Asn Pro Gln
 115 120 125

Ile Pro Glu Lys Lys Gly Lys Glu Ala Asn Thr Gly Phe Gly Gly Pro
 130 135 140

Val Ile Ser Ser Leu Tyr His Glu Glu Thr Ile Arg Glu Glu Asp Lys
 145 150 155 160

Asn Ile Phe Asp Tyr Cys Arg Glu Asn Asn Ile Asp His Ile Thr Lys
 165 170 175

Ala Ile Lys Ser Lys Asn Val Asp Val Asn Val Lys Asp Glu Glu Gly
 180 185 190

Arg Ala Leu Leu His Trp Ala Cys Asp Arg Gly His Lys Glu Leu Val
 195 200 205

Thr Val Leu Leu Gln His Arg Ala Asp Ile Asn Cys Gln Asp Asn Glu
210 215 220

Gly Gln Thr Ala Leu His Tyr Ala Ser Ala Cys Glu Phe Leu Asp Ile
225 230 235 240

Val Glu Leu Leu Leu Gln Ser Gly Ala Asp Pro Thr Leu Arg Asp Gln
245 250 255

Asp Gly Cys Leu Pro Glu Glu Val Thr Gly Cys Lys Thr Val Ser Leu
260 265 270

Val Leu Gln Arg His Thr Thr Gly Lys Ala
275 280

<210> 36

<211> 20

<212> PRT

<213> Homo sapiens

<400> 36

Gln Val Lys Val Gly Asn Cys Asn Thr Pro Lys Pro Ser Phe Phe Asp
1 5 10 15

Phe Glu Gly Lys
20

<210> 37

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (4)

<223> wherein Xaa is Val, Ile or Glu

<220>

<221> VARIANT

<222> (6)

<223> wherein Xaa is Asp, Asn or Pro

<220>

<221> VARIANT

<222> (7)

<223> wherein Xaa is Ile, Leu or Cys

<220>

<221> VARIANT

<222> (8)

<223> wherein Xaa is Asn or Lys

<220>

<221> VARIANT

<222> (9)

<223> wherein Xaa is Ile, Leu, Met or Thr

<220>

<221> VARIANT

<222> (10)

<223> wherein Xaa is Glu, Ser or Pro

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is Lys or Arg

<220>

<221> VARIANT

<222> (17)

<223> wherein Xaa is Leu or Phe

<220>

<221> VARIANT

<222> (20)

<223> wherein Xaa is Lys or Arg

<400> 37

Gln Ala Thr Xaa Gly Xaa Xaa Xaa Xaa Xaa Xaa Pro Gly Met Leu Asp

1

5

10

15

Xaa Lys Gly Xaa

<210> 38

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (4)

<223> wherein Xaa is Glu, Val or Ile

<220>

<221> VARIANT

<222> (6)

<223> wherein Xaa is Asp or Pro

<220>

<221> VARIANT

<222> (7)

<223> wherein Xaa is Cys, Ile or Leu

<220>

<221> VARIANT

<222> (8)

<223> wherein Xaa is Asn or Lys

<220>

<221> VARIANT

<222> (9)

<223> wherein Xaa is Ile, Leu, Met or Thr

<220>

<221> VARIANT

<222> (10)

<223> wherein Xaa is Ser or Pro

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is Tyr, Trp, Lys or Arg

<220>

<221> VARIANT

<222> (13)

<223> wherein Xaa is Gly or Arg

<220>

<221> VARIANT

<222> (14)

<223> wherein Xaa is Val or Phe

<220>

<221> VARIANT

<222> (15)

<223> wherein Xaa is Phe or Trp

<220>

<221> VARIANT

<222> (17)

<223> wherein Xaa is Phe or Pro

<220>

<221> VARIANT

<222> (18)

<223> wherein Xaa is Lys or Ile

<220>

<221> VARIANT

<222> (20)

<223> wherein Xaa is Lys or Arg

<400> 38

Gln Ala Thr Xaa Gly Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Xaa Asp

1

5

10

15

5

Xaa Xaa Gly Xaa

20

<210> 39

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (6)

<223> wherein Xaa is Asp or Pro

<220>

<221> VARIANT

<222> (8)

<223> wherein Xaa is Lys, Arg or Asn

<220>

<221> VARIANT

<222> (9)

<223> wherein Xaa is Ala, Ile, Thr, Val, Phe, Leu or Met

<220>

<221> VARIANT

<222> (10)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is Lys or Arg

<220>

<221> VARIANT

<222> (14)

<223> wherein Xaa is Ala, Ile, Thr, Val, Phe, Leu or Met

<220>

<221> VARIANT

<222> (15)

<223> wherein Xaa is Trp, Ala, Ile, Thr, Val, Phe, Leu
or Met

<220>

<221> VARIANT

<222> (17)

<223> wherein Xaa is Pro, Ala, Ile, Thr, Val, Phe, Leu
or Met

<220>

<221> VARIANT

<222> (19)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (20)

<223> wherein Xaa is Lys or Arg

<400> 39

Gln Ala Thr Glu Gly Xaa Cys Xaa Xaa Xaa Xaa Pro Gly Xaa Xaa Asp

1

5

10

15

Xaa Ile Xaa Xaa

20

<210> 40

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (3)

<223> wherein Xaa is Thr, Val or Lys

<220>

<221> VARIANT

<222> (4)

<223> wherein Xaa is Val or Ile

<220>

<221> VARIANT

<222> (9)

<223> wherein Xaa is Thr or Ile

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is Cys, Arg or Lys

<220>

<221> VARIANT

<222> (13)

<223> wherein Xaa is Gly, Glu or Ser

<220>

<221> VARIANT

<222> (16)

<223> wherein Xaa is Asp or Glu

<220>

<221> VARIANT

<222> (18)

<223> wherein Xaa is Thr, Lys or Glu

<400> 40

Gln Ala Xaa Xaa Gly Asn Ile Asn Xaa Glu Xaa Pro Xaa Met Leu Xaa

1

5

10

15

Phe Xaa Gly Lys

20

<210> 41

<211> 19

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (2)

<223> wherein Xaa is Ala, Ile, Thr, Val, Phe, Leu or Met

<220>

<221> VARIANT

<222> (3)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (4)

<223> wherein Xaa is Ala, Ile, Thr, Val, Phe, Leu or Met

<220>

<221> VARIANT

<222> (6)

<223> wherein Xaa is Asp, Glu or Asn

<220>

<221> VARIANT

<222> (7)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (9)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (12)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (13)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (14)

<223> wherein Xaa is Ala, Ile, Thr, Val, Phe, Leu or Met

<220>

<221> VARIANT

<222> (15)

<223> wherein Xaa is Asp or Glu

<220>

<221> VARIANT

<222> (16)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (17)

<223> wherein Xaa is any amino acid

<400> 41

Gln Xaa Xaa Xaa Gly Xaa Xaa Asn Xaa Glu Xaa Xaa Xaa Xaa Xaa Xaa

1

5

10

15

Xaa Gly Lys

<210> 42

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (6)

<223> wherein Xaa is Asp, Asn or Pro

<220>

<221> VARIANT

<222> (7)

<223> wherein Xaa is Ile or Cys

<220>

<221> VARIANT

<222> (9)

<223> wherein Xaa is Thr, Ile, Met or Leu

<220>

<221> VARIANT

<222> (10)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is Arg or Lys

<220>

<221> VARIANT

<222> (14)

<223> wherein Xaa is Met, Val or Phe

<220>

<221> VARIANT

<222> (15)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (17)

<223> wherein Xaa is Phe or Leu

<220>

<221> VARIANT

<222> (18)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (20)

<223> wherein Xaa is Lys or Arg

<400> 42

Gln Ala Thr Val Gly Xaa Xaa Asn Xaa Xaa Xaa Pro Gly Xaa Xaa Asp

1

5

10

15

Xaa Xaa Gly Xaa

20

<210> 43

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (7)

<223> wherein Xaa is Ile or Cys

<220>

<221> VARIANT

<222> (10)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (13)

<223> wherein Xaa is Gly or Pro

<220>

<221> VARIANT

<222> (14)

<223> wherein Xaa is Met or Ala

<220>

<221> VARIANT

<222> (15)

<223> wherein Xaa is Leu or Ser

<220>

<221> VARIANT

<222> (17)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (18)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (19)

<223> wherein Xaa is Gly or Ala

<220>

<221> VARIANT

<222> (20)

<223> wherein Xaa is Lys or Arg

<400> 43

Gln Ala Thr Val Gly Asp Xaa Asn Ile Xaa Xaa Pro Xaa Xaa Xaa Asp

1

5

10

15

Xaa Xaa Xaa Xaa

20

<210> 44

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (3)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (4)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (6)

<223> wherein Xaa is Asn, Asp or Pro

<220>

<221> VARIANT

<222> (7)

<223> wherein Xaa is Ile or Cys

<220>

<221> VARIANT

<222> (9)

<223> wherein Xaa is Thr, Ile or Met

<220>

<221> VARIANT

<222> (10)

<223> wherein Xaa is Glu or Pro

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (12)

<223> wherein Xaa is Pro, Leu or Ser

<220>

<221> VARIANT

<222> (13)

<223> wherein Xaa is Gly, Glu or Ser

<220>

<221> VARIANT

<222> (14)

<223> wherein Xaa is Met, Val or Phe

<220>

<221> VARIANT

<222> (15)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (17)

<223> wherein Xaa is Phe or Leu

<220>

<221> VARIANT

<222> (18)

<223> wherein Xaa is Lys, Ile or Glu

<400> 44

Gln Ala Xaa Xaa Gly Xaa Xaa Asn Xaa Xaa Xaa Xaa Xaa Xaa Asp

1

5

10

15

Xaa Xaa Gly Lys

20

<210> 45

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (2)

<223> wherein Xaa is Ala, Ile, Thr, Val, Phe, Leu or Met

<220>

<221> VARIANT

<222> (3)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (6)

<223> wherein Xaa is Asp, Glu or Asn

<220>

<221> VARIANT

<222> (7)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (10)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is Arg or Lys

<220>

<221> VARIANT

<222> (13)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (14)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (15)

<223> wherein Xaa is Ala, Ile, Thr, Val, Phe, Leu or Met

<220>

<221> VARIANT

<222> (18)

<223> wherein Xaa is any amino acid

<400> 45

Gln Xaa Xaa Val Gly Xaa Xaa Asn Thr Xaa Xaa Pro Xaa Xaa Xaa Asp

1

5

10

15

Phe Xaa Gly Lys

20

<210> 46

<211> 687

<212> DNA

<213> Homo sapiens

<400> 46

atgggagacg caggagccac ggcggccgcg cttaggcctg ctcacaacct ccgcccggcc 60
ccgcccacag cctccgccgc gcacgcgcag tcctcacgaa cgagcgcgcc aagcgcacag 120
cgccgccttc cggcagagcc ctcccaccag ccctcagcac cagggaccgc ctccaccacc 180
ccatgtgcc aagtggagttc gagctgcgcg gccctcaagc agctgaaggg tcccgtgagc 240
gatcaggaga agctgctggt ctacggcttg taaaaacagg ccacccaggg cgactgcgac 300
atccccggcc ctccggcctc agacgtgaga gccagggcca agtgggaggc ttggagcgcg 360
aacaaagggg cgtccaagat ggacgccatg aggggctacg cggccaaagt ggaggagctg 420
acgaagaagg aagtgggggg cgtggagcgc gaacaaaggg gcgtgcaaga tggacgcat 480
gaggggctac gcggccaaag tggaggagct gacgaagaag gaagggcgtc caagatggac 540
gccatgaggg gctacgcggc caaagtggag gagctgacga agaaggaagt ggggggcgtg 600
gagcgcgaac aaaggggcgt ccaagatgga cgccatgagg ggctacgcgg ccagagttag 660
gagatgagga agaaggaggc tggctga 687

<210> 47

<211> 228

<212> PRT

<213> Homo sapiens

<400> 47

Met Gly Asp Ala Gly Ala Thr Ala Ala Ala Leu Arg Pro Ala His Asn

1 5 10 15

Leu Arg Pro Ala Pro Pro Thr Ala Ser Ala Ala His Ala Gln Ser Ser

20 25 30

Arg Thr Ser Ala Pro Ser Ala Gln Arg Arg Leu Pro Ala Glu Pro Ser

35 40 45

His Gln Pro Ser Ala Pro Gly Thr Ala Ser Thr Thr Pro Cys Ala Lys

50 55 60

Trp Ser Ser Ser Cys Ala Ala Leu Lys Gln Leu Lys Gly Pro Val Ser

65 70 75 80

Asp Gln Glu Lys Leu Leu Val Tyr Gly Leu Tyr Lys Gln Ala Thr Gln

85 90 95

Gly Asp Cys Asp Ile Pro Gly Pro Pro Ala Ser Asp Val Arg Ala Arg

100 105 110

Ala Lys Trp Glu Ala Trp Ser Ala Asn Lys Gly Ala Ser Lys Met Asp

115 120 125

Ala Met Arg Gly Tyr Ala Ala Lys Val Glu Glu Leu Thr Lys Lys Glu

130

135

140

Val Gly Gly Val Glu Arg Glu Gln Arg Gly Val Gln Asp Gly Arg His

145

150

155

160

Glu Gly Leu Arg Gly Gln Ser Gly Gly Ala Asp Glu Glu Gly Arg Ala

165

170

175

Ser Lys Met Asp Ala Met Arg Gly Tyr Ala Ala Lys Val Glu Glu Leu

180

185

190

Thr Lys Lys Glu Val Gly Gly Val Glu Arg Glu Gln Arg Gly Val Gln

195

200

205

Asp Gly Arg His Glu Gly Leu Arg Gly Gln Ser Glu Glu Met Arg Lys

210

215

220

Lys Glu Ala Gly

225

<210> 48

<211> 576

<212> DNA

<213> Homo sapiens

<400> 48

atgggagacg caggagccac ggcggccgcg cttaggcctg ctcacaacct ccgcccggcc 60
 ccgcccacag cctccgccgc gcacgccagt cctcacgaac gagcgcgccca agcaagccgc 120
 gccttcgggc agagccctcc caccagccct cagcttctag caccagggac cgctccacc 180
 accccatgtg ccaagtggag ttcgagctgc gcggccctca agcagctgaa gggctccgtg 240
 agcgatcagg agaagctgct ggtctacggc ttgtacaaac aggccacca gggcgactgc 300
 gacatccccg gccctccggc ctcagacgtg agagccaggg ccaagtggga ggcttggagc 360
 gcgaaaaaag gggcgtccaa gatggacgcc atgaggggct acgcggccaa agtggaggag 420
 ctgacgaaga aggaagtggg gggcgtggag cgcgaacaaa ggggcgtgca agatggacgc 480
 catgaggggc tacgcggcca aagtggagga gctgacgaag aaggaagtgg ggggcgtgga 540
 gcgcgaacaa aggggcgtcc aagatggacg ccatga 576

<210> 49

<211> 191

<212> PRT

<213> Homo sapiens

<400> 49

Met Gly Asp Ala Gly Ala Thr Ala Ala Ala Leu Arg Pro Ala His Asn

1 5 10 15

Leu Arg Pro Ala Pro Pro Thr Ala Ser Ala Ala His Ala Ser Pro His

20 25 30

Glu Arg Ala Arg Gln Ala Ser Arg Ala Phe Arg Gln Ser Pro Pro Thr

35 40 45

Ser Pro Gln Leu Leu Ala Pro Gly Thr Ala Ser Thr Thr Pro Cys Ala

50 55 60

Lys Trp Ser Ser Ser Cys Ala Ala Leu Lys Gln Leu Lys Gly Pro Val
65 70 75 80

Ser Asp Gln Glu Lys Leu Leu Val Tyr Gly Leu Tyr Lys Gln Ala Thr
85 90 95

Gln Gly Asp Cys Asp Ile Pro Gly Pro Pro Ala Ser Asp Val Arg Ala
100 105 110

Arg Ala Lys Trp Glu Ala Trp Ser Ala Lys Lys Gly Ala Ser Lys Met
115 120 125

Asp Ala Met Arg Gly Tyr Ala Ala Lys Val Glu Glu Leu Thr Lys Lys
130 135 140

Glu Val Gly Gly Val Glu Arg Glu Gln Arg Gly Val Gln Asp Gly Arg
145 150 155 160

His Glu Gly Leu Arg Gly Gln Ser Gly Gly Ala Asp Glu Glu Gly Ser
165 170 175

Gly Gly Arg Gly Ala Arg Thr Lys Gly Arg Pro Arg Trp Thr Pro
180 185 190

<210> 50

<211> 294

<212> DNA

<213> Homo sapiens

<400> 50

gctgcggcca ccatgtccct gcaggctgat tttgacatgg tcacagaaga tgtgaggaag 60
ctgaaaacaa gaccagatga tgaagaactg aaagaacttt atgggcttta caaacaagct 120
gtaattggaa acattaatat tgagtgttca gaaatgctag aattaaaagg caaggccaaa 180
tgggaagcac agaaccacca aaaaggattg tcagaggaag atatgatgcg tgcctttatt 240
tctaaagccg aagagctgat agaaaaatat ggaatttaga ataaagcata tgat 294

<210> 51

<211> 293

<212> DNA

<213> Homo sapiens

<400> 51

gctgaatcaa ccatgtcacc ccaggcagat tttgacaaag cagcagggga tgtaaagaaa 60
ttgaaaacaa aaccaactga cgatgaactg aaggaactgt acggactcta caagcagtcc 120
actgttgggg acataaatat agagtgtcct ggcattgctag atctgaaggg caaggccaag 180
tgggacgcat ggaacctaaa gaaaggcttg tctaaggaag atgcgatgag cgcttatgtt 240
tctaaagccc atgagctgat agaaaaatat ggcctgtaac aaggtcgcat gat 293

<210> 52

<211> 85

<212> PRT

<213> Homo sapiens

<400> 52

Gln Ala Asp Phe Asp Met Val Thr Glu Asp Val Arg Lys Leu Lys Thr

1 5 10 15

Arg Pro Asp Asp Glu Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys Gln

20 25 30

Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met Leu Glu Leu

35 40 45

Lys Gly Lys Ala Lys Trp Glu Ala Gln Asn Pro Gln Lys Gly Leu Ser

50 55 60

Glu Glu Asp Met Met Arg Ala Phe Ile Ser Lys Ala Glu Glu Leu Ile

65 70 75 80

Glu Lys Tyr Gly Ile

85

<210> 53

<211> 85

<212> PRT

<213> Homo sapiens

<400> 53

Gln Ala Asp Phe Asp Glu Ala Ala Glu Glu Val Lys Lys Leu Lys Thr

1 5 10 15

Arg Pro Thr Asp Glu Glu Leu Lys Glu Leu Tyr Gly Phe Tyr Lys Gln
20 25 30

Ala Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met Leu Asp Leu
35 40 45

Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Leu Lys Lys Gly Ile Ser
50 55 60

Lys Glu Asp Ala Met Asn Ala Tyr Ile Ser Lys Ala Lys Thr Met Val
65 70 75 80

Glu Lys Tyr Gly Ile
85

<210> 54

<211> 86

<212> PRT

<213> Homo sapiens

<400> 54

Ser Gln Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Lys Asn Leu Lys
1 5 10 15

Thr Lys Pro Ala Asp Asp Glu Met Leu Phe Ile Tyr Ser His Tyr Lys
20 25 30

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Ile Leu Asp

35

40

45

Leu Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Gly Leu Lys Gly Thr

50

55

60

Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu Glu Leu

65

70

75

80

Lys Lys Lys Tyr Gly Ile

85

<210> 55

<211> 86

<212> PRT

<213> Homo sapiens

<400> 55

Ser Gln Ala Glu Phe Asp Lys Ala Ala Glu Glu Val Lys His Leu Lys

1

5

10

15

Thr Lys Pro Ala Asp Glu Glu Met Leu Phe Ile Tyr Ser His Tyr Lys

20

25

30

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp

35

40

45

Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly Thr

50

55

60

Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asp Lys Val Glu Glu Leu

65

70

75

80

Lys Lys Lys Tyr Gly Ile

85

<210> 56

<211> 86

<212> PRT

<213> Homo sapiens

<400> 56

Ser Gln Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His Leu Lys

1

5

10

15

Thr Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His Tyr Lys

20

25

30

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp

35

40

45

Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly Thr

50

55

60

Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu Glu Leu
65 70 75 80

Lys Lys Lys Tyr Gly Ile
85

<210> 57

<211> 88

<212> PRT

<213> Homo sapiens

<400> 57

Met Ser Leu Gln Ala Asp Phe Asp Met Val Thr Glu Asp Val Arg Lys
1 5 10 15

Leu Lys Thr Arg Pro Asp Asp Glu Glu Leu Lys Glu Leu Tyr Gly Leu
20 25 30

Tyr Lys Gln Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met
35 40 45

Leu Glu Leu Lys Gly Lys Ala Lys Trp Glu Ala Gln Asn Pro Gln Lys
50 55 60

Gly Leu Ser Glu Glu Asp Met Met Arg Ala Phe Ile Ser Lys Ala Glu
65 70 75 80

Glu Leu Ile Glu Lys Tyr Gly Ile

85

<210> 58

<211> 82

<212> PRT

<213> Homo sapiens

<400> 58

Lys Arg Cys Ala Gly Ile Lys His Phe Lys Thr Lys Pro Ala Asp Asp

1 5 10 15

Glu Met Arg Phe Leu Tyr Gly His Tyr Lys Arg Ala Thr Val Gly Asn

20 25 30

Ile Lys Thr Glu Arg Pro Gly Met Val Asp Phe Lys Gly Lys Ala Lys

35 40 45

Trp Asp Pro Trp Asn Leu Val Lys Gly Ala Ala Arg Glu Asp Pro Met

50 55 60

Lys Ala Lys Ala Tyr Val Lys Lys Val Glu Glu Leu Lys Lys Lys Phe

65 70 75 80

Arg Ile

<210> 59

<211> 80

<212> PRT

<213> Homo sapiens

<400> 59

Lys Ala Ala Glu Glu Val Lys His Leu Lys Thr Lys Pro Ala Asp Glu

1 5 10 15

Glu Met Leu Phe Ile Tyr Ser His Tyr Lys Gln Ala Thr Val Gly Asp

20 25 30

Ile Asn Thr Glu Arg Pro Gly Met Leu Asp Phe Lys Gly Lys Ala Lys

35 40 45

Trp Asp Ala Trp Asn Glu Leu Lys Gly Thr Ser Lys Glu Asp Ala Met

50 55 60

Lys Ala Tyr Ile Asp Lys Val Glu Glu Leu Lys Lys Lys Tyr Gly Ile

65 70 75 80

<210> 60

<211> 91

<212> PRT

<213> Homo sapiens

<400> 60

Glu Lys Lys Lys Lys Lys Arg Cys Ala Gly Ile Lys His Phe Lys Thr

1 5 10 15

Lys Pro Ala Asp Asp Glu Met Arg Phe Leu Tyr Gly His Tyr Lys Arg

20 25 30

Ala Thr Val Gly Asn Ile Lys Thr Glu Arg Pro Gly Met Val Asp Phe

35 40 45

Lys Gly Lys Ala Lys Trp Asp Pro Trp Asn Leu Val Lys Gly Ala Ala

50 55 60

Arg Glu Asp Pro Met Lys Ala Lys Ala Tyr Val Lys Lys Val Glu Glu

65 70 75 80

Leu Lys Lys Lys Phe Arg Ile Arg Glu Thr Gly

85 90

<210> 61

<211> 88

<212> PRT

<213> Homo sapiens

<400> 61

Glu Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His Leu Lys Thr

1 5 10 15

Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His Tyr Lys Gln

20 25 30

Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp Phe

35 40 45

Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly Thr Ser

50 55 60

Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu Glu Leu Lys

65 70 75 80

Lys Lys Tyr Gly Ile Glu Thr Gly

85

<210> 62

<211> 138

<212> PRT

<213> Homo sapiens

<400> 62

Met Ala Lys Pro Ile Ser Thr Lys Asn Thr Lys Ile Ser Arg His Gly

1	5	10	15
Trp His Ala Ala Val Ile Thr Ala Ala Arg Glu Ala Glu Ala Glu Asn			
20	25	30	
His Leu Ser Trp Glu Glu Lys Lys Lys Lys Lys Arg Cys Ala Gly Ile			
35	40	45	
Lys His Phe Lys Thr Lys Pro Ala Asp Asp Glu Met Arg Phe Leu Tyr			
50	55	60	
Gly His Tyr Lys Arg Ala Thr Val Gly Asn Ile Lys Thr Glu Arg Pro			
65	70	75	80
Gly Met Val Asp Phe Lys Gly Lys Ala Lys Trp Asp Pro Trp Asn Leu			
85	90	95	
Val Lys Gly Ala Ala Arg Glu Asp Pro Met Lys Ala Lys Ala Tyr Val			
100	105	110	
Lys Lys Val Glu Glu Leu Lys Lys Lys Phe Arg Ile Arg Glu Thr Gly			
115	120	125	
Ile Val Ala Ser His Ala Phe Val Leu Asn			
130	135		

<210> 63

<211> 86

<212> PRT

<213> Bos taurus

<400> 63

Ser Gln Ala Glu Phe Asp Lys Ala Ala Glu Glu Val Lys His Leu Lys

1

5

10

15

Thr Lys Pro Ala Asp Glu Glu Met Leu Phe Ile Tyr Ser His Tyr Lys

20

25

30

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp

35

40

45

Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly Thr

50

55

60

Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asp Lys Val Glu Glu Leu

65

70

75

80

Lys Lys Lys Tyr Gly Ile

85

<210> 64

<211> 86

<212> PRT

<213> Homo sapiens

<400> 64

Ser Gln Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His Leu Lys

1 5 10 15

Thr Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His Tyr Lys

20 25 30

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp

35 40 45

Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly Thr

50 55 60

Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu Glu Leu

65 70 75 80

Lys Lys Lys Tyr Gly Ile

85

<210> 65

<211> 256

<212> DNA

<213> Homo sapiens

<400> 65

aggctgattt tgacagggct gcagaagatg tgaggaagct gaaagcaaga ccagatgatg 60

gagaactgaa agaactctat gggctttaca aacaagcaat agttggagac attaatttg 120
 cgtgtccagg aatgctagat ttaaaaggca aagccaaatg ggaagcatgg aacctcaaaa 180
 aagggttgtc gacggaagat gcgacgagtg cctatatattc taaagcaaag gagctgatag 240
 aaaaatacgg aattta 256

<210> 66

<211> 256

<212> DNA

<213> Homo sapiens

<400> 66

aggcagattt tgacaaagca gcaggggatg taaagaaatt gaaaacaaaa ccaactgacg 60
 atgaactgaa ggaactgtac ggactctaca agcagtccac tgttggggac ataaatatag 120
 agtgtcctgg catgctagat ctgaagggca aggccaagtg ggacgcatgg aacctaaaga 180
 aaggcttgtc taaggaagat gcgatgagcg cttatgtttc taaagcccat gagctgatag 240
 aaaaatatgg cctgta 256

<210> 67

<211> 258

<212> DNA

<213> Homo sapiens

<400> 67

aggctgattt tgacagggct gcagaagatg tgaggaagct gaaagcaaga ccagatgatg 60
 gagaactgaa agaactctat gggctttaca aacaagcaat agttggagac attaatttg 120
 cgtgtccagg aatgctagat ttaaaaggca aagccaaatg ggaagcatgg aacctcaaaa 180
 aagggttgtc gacggaagat gcgacgagtg cctatatattc taaagcaaag gagctgatag 240
 aaaaatacgg aatttaga 258

<210> 68

<211> 259

<212> DNA

<213> Homo sapiens

<400> 68

aggctgagtt tgagaaagct gcagaggagg ttaggcacct taagaccaag ccatcggatg 60
aggagatgct gttcatctat ggccactaca aacaagcaac tgtgggcgac ataaatacag 120
aacggccccg gatgttggac ttcacgggca aggccaagtg ggatgcctgg aatgagctga 180
aagggacttc caaggaagat gccatgaaag cttacatcaa caaagtagaa gagctaaaga 240
aaaaatacgg gatatgaga 259

<210> 69

<211> 88

<212> PRT

<213> Homo sapiens

<400> 69

Phe Phe Leu Lys Ala Asp Phe Asp Arg Ala Ala Glu Asp Val Arg Lys
1 5 10 15

Leu Lys Ala Arg Pro Asp Asp Gly Glu Leu Lys Glu Leu Tyr Gly Leu
20 25 30

Tyr Lys Gln Ala Ile Val Gly Asp Ile Asn Ile Ala Cys Pro Gly Met
35 40 45

Leu Asp Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Leu Lys Lys

50

55

60

Gly Leu Ser Thr Glu Asp Ala Thr Ser Ala Tyr Ile Ser Lys Ala Lys

65

70

75

80

Glu Leu Ile Glu Lys Tyr Gly Ile

85

<210> 70

<211> 89

<212> PRT

<213> Homo sapiens

<400> 70

Phe Phe Leu His Gln Ala Asp Phe Asp Glu Ala Ala Glu Glu Val Lys

1

5

10

15

Lys Leu Lys Thr Arg Pro Thr Asp Glu Glu Leu Lys Glu Leu Tyr Gly

20

25

30

Phe Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly

35

40

45

Met Leu Asp Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Leu Lys

50

55

60

Lys Gly Ile Ser Lys Glu Asp Ala Met Asn Ala Tyr Ile Ser Lys Ala

65

70

75

80

Lys Thr Met Val Glu Lys Tyr Gly Ile

85

<210> 71

<211> 85

<212> PRT

<213> Homo sapiens

<400> 71

Lys Ala Asp Phe Asp Arg Ala Ala Glu Asp Val Arg Lys Leu Lys Ala

1

5

10

15

Arg Pro Asp Asp Gly Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys Gln

20

25

30

Ala Ile Val Gly Asp Ile Asn Ile Ala Cys Pro Gly Met Leu Asp Leu

35

40

45

Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Leu Lys Lys Gly Leu Ser

50

55

60

Thr Glu Asp Ala Thr Ser Ala Tyr Ile Ser Lys Ala Lys Glu Leu Ile

65

70

75

80

Glu Lys Tyr Gly Ile

85

<210> 72

<211> 85

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (6)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (9)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (12)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (16)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (17)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (19)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (21)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (33)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (34)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (41)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (55)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (65)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (69)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (73)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (77)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (85)

<223> wherein Xaa is any amino acid

<400> 72

Xaa Ala Asp Phe Asp Xaa Ala Ala Xaa Asp Val Xaa Lys Leu Lys Xaa

1

5

10

15

Xaa Pro Xaa Asp Xaa Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys Gln

20

25

30

Xaa Xaa Val Gly Asp Ile Asn Ile Xaa Cys Pro Gly Met Leu Asp Leu

35

40

45

Lys Gly Lys Ala Lys Trp Xaa Ala Trp Asn Leu Lys Lys Gly Leu Ser

50

55

60

Xaa Glu Asp Ala Xaa Ser Ala Tyr Xaa Ser Lys Ala Xaa Glu Leu Ile

65

70

75

80

Glu Lys Tyr Gly Xaa

85

<210> 73

<211> 85

<212> PRT

<213> Homo sapiens

<400> 73

Gln Ala Asp Phe Asp Lys Ala Ala Gly Asp Val Lys Lys Leu Lys Thr

1 5 10 15

Lys Pro Thr Asp Asp Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys Gln

20 25 30

Ser Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met Leu Asp Leu

35 40 45

Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Leu Lys Lys Gly Leu Ser

50 55 60

Lys Glu Asp Ala Met Ser Ala Tyr Val Ser Lys Ala His Glu Leu Ile

65 70 75 80

Glu Lys Tyr Gly Leu

85

<210> 74

<211> 96

<212> PRT

<213> Homo sapiens

<400> 74

Met Leu Leu Leu Phe Val Cys Leu Phe Phe Leu Lys Ala Asp Phe Asp

1 5 10 15

Arg Ala Ala Glu Asp Val Arg Lys Leu Lys Ala Arg Pro Asp Asp Gly

20

25

30

Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys Gln Ala Ile Val Gly Asp

35

40

45

Ile Asn Ile Ala Cys Pro Gly Met Leu Asp Leu Lys Gly Lys Ala Lys

50

55

60

Trp Glu Ala Trp Asn Leu Lys Lys Gly Leu Ser Thr Glu Asp Ala Thr

65

70

75

80

Ser Ala Tyr Ile Ser Lys Ala Lys Glu Leu Ile Glu Lys Tyr Gly Ile

85

90

95

<210> 75

<211> 88

<212> PRT

<213> Frog

<400> 75

Met Ser Pro Gln Ala Asp Phe Asp Lys Ala Ala Gly Asp Val Lys Lys

1

5

10

15

Leu Lys Thr Lys Pro Thr Asp Asp Glu Leu Lys Glu Leu Tyr Gly Leu

20

25

30

Tyr Lys Gln Ser Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met

35

40

45

Leu Asp Leu Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Leu Lys Lys

50

55

60

Gly Leu Ser Lys Glu Asp Ala Met Ser Ala Tyr Val Ser Lys Ala His

65

70

75

80

Glu Leu Ile Glu Lys Tyr Gly Leu

85

<210> 76

<211> 103

<212> PRT

<213> Duck

<400> 76

Met Phe Gln Ala His Leu Leu Arg Gly Thr Leu Thr Leu Ser Phe Phe

1

5

10

15

Leu His Gln Ala Asp Phe Asp Glu Ala Ala Glu Glu Val Lys Lys Leu

20

25

30

Lys Thr Arg Pro Thr Asp Glu Glu Leu Lys Glu Leu Tyr Gly Phe Tyr

35

40

45

Lys Gln Ala Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met Leu

50

55

60

Asp Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Leu Lys Lys Gly

65

70

75

80

Ile Ser Lys Glu Asp Ala Met Asn Ala Tyr Ile Ser Lys Ala Lys Thr

85

90

95

Met Val Glu Lys Tyr Gly Ile

100

<210> 77

<211> 87

<212> PRT

<213> Homo sapiens

<400> 77

Met Ser Gln Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His Leu

1

5

10

15

Lys Thr Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His Tyr

20

25

30

Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu

35

40

45

Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly

50

55

60

Thr Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu Glu

65

70

75

80

Leu Lys Lys Lys Tyr Gly Ile

85

<210> 78

<211> 274

<212> DNA

<213> Homo sapiens

<400> 78

ccaccatggc actgcaggct gaattcgaca aggctgcaga agacgtgagg aagctgccaa 60
 caagaccagc agataataaa gaactgaaaa aactcgatgg actttacaaa caagctataa 120
 ttggagacat taatattgag tatctgggaa tgctggactt taagggcaag gccaaatgcg 180
 cagcatggac cctccaaaaa aggttgtcaa aggaagatgc aacgagtgtc tctatttcta 240
 aggcaaaaga gccgatagaa aaataggaca tttta 274

<210> 79

<211> 271

<212> DNA

<213> Homo sapiens

<400> 79

caaccatgtc accccaggca gattttgaca aagcagcagg ggatgtaaag aaattgaaaa 60
caaaaccaac tgacgatgaa ctgaaggaac tgtacggact ctacaagcag tccactgttg 120
gggacataaa tatagagtgt cctggcatgc tagatctgaa gggcaaggcc aagtgggacg 180
catggaacct aaagaaaggc ttgtctaagg aagatgcgat gagcgcttat gtttctaaag 240
cccatgagct gatagaaaaa tatggcctgt a 271

<210> 80

<211> 262

<212> DNA

<213> Homo sapiens

<400> 80

caggctgaat tcgacaaggc tgcagaagac gtgaggaagc tgccaacaag accagcagat 60
aataaagaac tgaaaaaact cgatggactt tacaacaag ctataattgg agacattaat 120
attgagtatc tgggaatgct ggactttaag ggcaaggcca aatgcgcagc atggaccctc 180
caaaaaaggt tgtcaaagga agatgcaacg agtgtctcta tttctaaggc aaaagagccg 240
atagaaaaat aggacattta ga 262

<210> 81

<211> 260

<212> DNA

<213> Homo sapiens

<400> 81

caggctgagt ttgagaaagc tgcaaggag gttaggcacc ttaagaccaa gccatcggat 60
gaggagatgc tgttcatcta tggccactac aaacaagcaa ctgtgggcga cataaatata 120

gaacggcccg ggatgttgga cttcacgggc aaggccaagt gggatgcctg gaatgagctg 180
aaagggactt ccaaggaaga tgccatgaaa gcttacatca acaaagtaga agagctaaag 240
aaaaaatacg ggatatgaga 260

<210> 82

<211> 86

<212> PRT

<213> Homo sapiens

<400> 82

Met Ala Leu Gln Ala Glu Phe Asp Lys Ala Ala Glu Asp Val Arg Lys
1 5 10 15

Leu Pro Thr Arg Pro Ala Asp Asn Lys Glu Leu Lys Lys Leu Asp Gly
20 25 30

Leu Tyr Lys Gln Ala Ile Ile Gly Asp Ile Asn Ile Glu Tyr Leu Gly
35 40 45

Met Leu Asp Phe Lys Gly Lys Ala Lys Cys Ala Ala Trp Thr Leu Gln
50 55 60

Lys Arg Leu Ser Lys Glu Asp Ala Thr Ser Val Ser Ile Ser Lys Ala
65 70 75 80

Lys Glu Pro Ile Glu Lys
85

<210> 83

<211> 85

<212> PRT

<213> Homo sapiens

<400> 83

Met Ser Pro Gln Ala Asp Phe Asp Lys Ala Ala Gly Asp Val Lys Lys

1 5 10 15

Leu Lys Thr Lys Pro Thr Asp Asp Glu Leu Lys Glu Leu Tyr Gly Leu

20 25 30

Tyr Lys Gln Ser Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met

35 40 45

Leu Asp Leu Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Leu Lys Lys

50 55 60

Gly Leu Ser Lys Glu Asp Ala Met Ser Ala Tyr Val Ser Lys Ala His

65 70 75 80

Glu Leu Ile Glu Lys

85

<210> 84

<211> 88

<212> PRT

<213> Frog

<400> 84

Met Ser Pro Gln Ala Asp Phe Asp Lys Ala Ala Gly Asp Val Lys Lys
1 5 10 15

Leu Lys Thr Lys Pro Thr Asp Asp Glu Leu Lys Glu Leu Tyr Gly Leu
20 25 30

Tyr Lys Gln Ser Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met
35 40 45

Leu Asp Leu Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Leu Lys Lys
50 55 60

Gly Leu Ser Lys Glu Asp Ala Met Ser Ala Tyr Val Ser Lys Ala His
65 70 75 80

Glu Leu Ile Glu Lys Tyr Gly Leu
85

<210> 85

<211> 103

<212> PRT

<213> Duck

<400> 85

Met Phe Gln Ala His Leu Leu Arg Gly Thr Leu Thr Leu Ser Phe Phe

1 5 10 15

Leu His Gln Ala Asp Phe Asp Glu Ala Ala Glu Glu Val Lys Lys Leu

20 25 30

Lys Thr Arg Pro Thr Asp Glu Glu Leu Lys Glu Leu Tyr Gly Phe Tyr

35 40 45

Lys Gln Ala Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met Leu

50 55 60

Asp Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Leu Lys Lys Gly

65 70 75 80

Ile Ser Lys Glu Asp Ala Met Asn Ala Tyr Ile Ser Lys Ala Lys Thr

85 90 95

Met Val Glu Lys Tyr Gly Ile

100

<210> 86

<211> 87

<212> PRT

<213> Homo sapiens

<400> 86

Met Ser Gln Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His Leu

1 5 10 15

Lys Thr Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His Tyr

20 25 30

Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu

35 40 45

Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly

50 55 60

Thr Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu Glu

65 70 75 80

Leu Lys Lys Lys Tyr Gly Ile

85

<210> 87

<211> 86

<212> PRT

<213> Homo sapiens

<400> 87

Met Ala Leu Gln Ala Glu Phe Asp Lys Ala Ala Glu Asp Val Arg Lys

1 5 10 15

Leu Pro Thr Arg Pro Ala Asp Asn Lys Glu Leu Lys Lys Leu Asp Gly

20

25

30

Leu Tyr Lys Gln Ala Ile Ile Gly Asp Ile Asn Ile Glu Tyr Leu Gly

35

40

45

Met Leu Asp Phe Lys Gly Lys Ala Lys Cys Ala Ala Trp Thr Leu Gln

50

55

60

Lys Arg Leu Ser Lys Glu Asp Ala Thr Ser Val Ser Ile Ser Lys Ala

65

70

75

80

Lys Glu Pro Ile Glu Lys

85

<210> 88

<211> 530

<212> PRT

<213> Homo sapiens

<400> 88

Met Phe Gln Phe His Ala Gly Ser Trp Glu Ser Trp Cys Cys Cys Cys

1

5

10

15

Leu Ile Pro Ala Asp Arg Pro Trp Asp Arg Gly Gln His Trp Gln Leu

20

25

30

Glu Met Ala Asp Thr Arg Ser Val His Glu Thr Arg Phe Glu Ala Ala

35

40

45

Val Lys Val Ile Gln Ser Leu Pro Lys Asn Gly Ser Phe Gln Pro Thr

50

55

60

Asn Glu Met Met Leu Lys Phe Tyr Ser Phe Tyr Lys Gln Ala Thr Glu

65

70

75

80

Gly Pro Cys Lys Leu Ser Arg Pro Gly Phe Trp Asp Pro Ile Gly Arg

85

90

95

Tyr Lys Trp Asp Ala Trp Ser Ser Leu Gly Asp Met Thr Lys Glu Glu

100

105

110

Ala Met Ile Ala Tyr Val Glu Glu Met Lys Lys Ile Ile Glu Thr Met

115

120

125

Pro Met Thr Glu Lys Val Glu Glu Leu Leu Arg Val Ile Gly Pro Phe

130

135

140

Tyr Glu Ile Val Glu Asp Lys Lys Ser Gly Arg Ser Ser Asp Ile Thr

145

150

155

160

Ser Val Arg Leu Glu Lys Ile Ser Lys Cys Leu Glu Asp Leu Gly Asn

165

170

175

Val Leu Thr Ser Thr Pro Asn Ala Lys Thr Val Asn Gly Lys Ala Glu

180

185

190

Ser Ser Asp Ser Gly Ala Glu Ser Glu Glu Glu Glu Ala Gln Glu Glu

195

200

205

Val Lys Gly Ala Glu His Ser Asp Asn Asp Lys Lys Met Met Lys Lys

210

215

220

Ser Ala Asp His Lys Asn Leu Glu Val Ile Val Thr Asn Gly Tyr Asp

225

230

235

240

Lys Asp Gly Phe Val Gln Asp Ile Gln Asn Asp Ile His Ala Ser Ser

245

250

255

Ser Leu Asn Gly Arg Ser Thr Glu Glu Val Lys Pro Ile Asp Glu Asn

260

265

270

Leu Gly Gln Thr Gly Lys Ser Ala Val Cys Ile His Gln Gly Ile Asn

275

280

285

Asp Asp His Val Glu Asp Val Thr Gly Ile Gln His Leu Thr Ser Asp

290

295

300

Ser Asp Ser Glu Val Tyr Cys Asp Ser Met Glu Gln Phe Gly Gln Glu

305

310

315

320

Glu Ser Leu Asp Ser Phe Thr Ser Asn Asn Gly Pro Phe Gln Tyr Tyr

325	330	335
Leu Gly Gly His Ser Ser Gln Pro Met Glu Asn Ser Gly Phe Arg Glu		
340	345	350
Asp Ile Gln Val Pro Pro Gly Asn Gly Asn Ile Gly Asn Met Gln Val		
355	360	365
Val Ala Val Glu Gly Lys Gly Glu Val Lys His Gly Gly Glu Asp Gly		
370	375	380
Arg Asn Asn Ser Gly Ala Pro His Arg Glu Lys Arg Gly Gly Glu Thr		
385	390	395 400
Asp Glu Phe Ser Asn Val Arg Arg Gly Arg Gly His Arg Met Gln His		
405	410	415
Leu Ser Glu Gly Thr Lys Gly Arg Gln Val Gly Ser Gly Gly Asp Gly		
420	425	430
Glu Arg Trp Gly Ser Asp Arg Gly Ser Arg Gly Ser Leu Asn Glu Gln		
435	440	445
Ile Ala Leu Val Leu Met Arg Leu Gln Glu Asp Met Gln Asn Val Leu		
450	455	460
Gln Arg Leu Gln Lys Leu Glu Thr Leu Thr Ala Ala Lys Ser Ser Thr		
465	470	475 480

Ser Thr Leu Gln Thr Ala Pro Gln Pro Thr Ser Ser Gln Arg Pro Ser

485

490

495

Trp Trp Pro Phe Glu Met Ser Pro Gly Val Leu Thr Phe Ala Ile Ile

500

505

510

Trp Pro Phe Ile Ala Gln Trp Leu Val Tyr Leu Tyr Tyr Gln Arg Arg

515

520

525

Arg Arg

530

<210> 89

<211> 530

<212> PRT

<213> Homo sapiens

<400> 89

Met Phe Gln Phe His Ala Gly Ser Trp Glu Ser Trp Cys Cys Cys Cys

1

5

10

15

Cys Leu Ile Pro Gly Asp Arg Pro Trp Asp Arg Gly Arg Arg Trp Arg

20

25

30

Leu Glu Met Arg His Thr Arg Ser Val His Glu Thr Arg Phe Glu Ala

35

40

45

Ala Val Lys Val Ile Gln Ser Leu Pro Lys Asn Gly Ser Phe Gln Pro

50

55

60

Thr Asn Glu Met Met Leu Lys Phe Tyr Ser Phe Tyr Lys Gln Ala Thr

65

70

75

80

Glu Gly Pro Cys Lys Leu Ser Lys Pro Gly Phe Trp Asp Pro Val Gly

85

90

95

Arg Tyr Lys Trp Asp Ala Trp Ser Ser Leu Gly Asp Met Thr Lys Glu

100

105

110

Glu Ala Met Ile Ala Tyr Val Glu Glu Met Lys Lys Ile Leu Glu Thr

115

120

125

Met Pro Met Thr Glu Lys Val Glu Glu Leu Leu His Val Ile Gly Pro

130

135

140

Phe Tyr Glu Ile Val Glu Asp Lys Lys Ser Gly Arg Ser Ser Asp Leu

145

150

155

160

Thr Ser Val Arg Leu Glu Lys Ile Ser Lys Cys Leu Glu Asp Leu Gly

165

170

175

Asn Val Leu Ala Ser Thr Pro Asn Ala Lys Thr Val Asn Gly Lys Ala

180

185

190

Glu Ser Ser Asp Ser Gly Ala Glu Ser Glu Glu Glu Ala Ala Gln Glu
195 200 205

Asp Pro Lys Arg Pro Glu Pro Arg Asp Ser Asp Lys Lys Met Met Lys
210 215 220

Lys Ser Ala Asp His Lys Asn Leu Glu Ile Ile Val Thr Asn Gly Tyr
225 230 235 240

Asp Lys Asp Ser Phe Val Gln Gly Val Gln Asn Ser Ile His Thr Ser
245 250 255

Pro Ser Leu Asn Gly Arg Cys Thr Glu Glu Val Lys Ser Val Asp Glu
260 265 270

Asn Leu Glu Gln Thr Gly Lys Thr Val Val Phe Val His Gln Asp Val
275 280 285

Asn Ser Asp His Val Glu Asp Ile Ser Gly Ile Gln His Leu Thr Ser
290 295 300

Asp Ser Asp Ser Glu Val Tyr Cys Asp Ser Met Glu Gln Phe Gly Gln
305 310 315 320

Glu Glu Ser Leu Asp Gly Phe Ile Ser Asn Asn Gly Pro Phe Ser Tyr
325 330 335

Tyr Leu Gly Gly Asn Pro Ser Gln Pro Leu Glu Ser Ser Gly Phe Pro

340	345	350	
Glu Ala Val Gln Gly Leu Pro Gly Asn Gly Ser Pro Glu Asp Met Gln			
355	360	365	
Gly Ala Val Val Glu Gly Lys Gly Glu Val Lys Arg Gly Gly Glu Asp			
370	375	380	
Gly Gly Ser Asn Ser Gly Ala Pro His Arg Glu Lys Arg Ala Gly Glu			
385	390	395	400
Ser Glu Glu Phe Ser Asn Ile Arg Arg Gly Arg Gly His Arg Met Gln			
	405	410	415
His Leu Ser Glu Gly Ser Lys Gly Arg Gln Val Gly Ser Gly Gly Asp			
	420	425	430
Gly Glu Arg Trp Gly Ser Asp Arg Gly Ser Arg Gly Ser Leu Asn Glu			
	435	440	445
Gln Ile Ala Leu Val Leu Met Arg Leu Gln Glu Asp Met Gln Asn Val			
	450	455	460
Leu Gln Arg Leu His Lys Leu Glu Met Leu Ala Ala Ser Gln Ala Lys			
465	470	475	480
Ser Ser Ala Leu Gln Thr Ser Asn Gln Pro Thr Ser Pro Arg Pro Ser			
	485	490	495

Trp Trp Pro Phe Glu Met Ser Pro Gly Ala Leu Thr Phe Ala Ile Ile

500

505

510

Trp Pro Phe Ile Ala Gln Trp Leu Val His Leu Tyr Tyr Gln Arg Arg

515

520

525

Arg Arg

530

<210> 90

<211> 86

<212> PRT

<213> Homo sapiens

<400> 90

Met Ser Gln Ala Phe Glu Lys Ala Ala Lys Asp Ile Lys His Leu Glu

1

5

10

15

Thr Lys Pro Ala Asp Asp Glu Arg Met Phe Ile Tyr Ser Arg Cys Lys

20

25

30

Gln Ala Thr Val His Asp Leu Asn Thr Glu Trp Pro Arg Met Leu Asp

35

40

45

Leu Lys Gly Lys Ala Lys Gln Asp Ala Trp Asn Glu Leu Lys Asp Thr

50

55

60

Ala Lys Glu Asp Ala Val Lys Ala Asp Ile Asn Lys Val Glu Glu Arg

65

70

75

80

Asn Lys Lys Tyr Arg Ile

85

<210> 91

<211> 87

<212> PRT

<213> Homo sapiens

<400> 91

Met Ser Gln Ala Glu Phe Asp Lys Ala Ala Glu Glu Val Lys His Leu

1

5

10

15

Lys Thr Lys Pro Ala Asp Glu Glu Met Leu Phe Ile Tyr Ser His Tyr

20

25

30

Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu

35

40

45

Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly

50

55

60

Thr Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asp Lys Val Glu Glu

65

70

75

80

Leu Lys Lys Lys Tyr Gly Ile

85

<210> 92

<211> 104

<212> PRT

<213> Homo sapiens

<400> 92

Met Trp Gly Asp Leu Trp Leu Leu Pro Pro Ala Ser Ala Asn Pro Gly

1

5

10

15

Thr Gly Thr Glu Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His

20

25

30

Leu Lys Thr Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His

35

40

45

Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met

50

55

60

Leu Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys

65

70

75

80

Gly Thr Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu

85

90

95

Glu Leu Lys Lys Lys Tyr Gly Ile

100

<210> 93

<211> 104

<212> PRT

<213> Homo sapiens

<400> 93

Met Trp Gly Asp Leu Trp Leu Leu Pro Pro Ala Ser Ala Asn Pro Gly

1

5

10

15

Thr Gly Thr Glu Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His

20

25

30

Leu Lys Thr Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His

35

40

45

Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met

50

55

60

Leu Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys

65

70

75

80

Gly Thr Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu

85

90

95

Glu Leu Lys Lys Lys Tyr Gly Ile

100

<210> 94

<211> 359

<212> PRT

<213> Homo sapiens

<400> 94

Met Arg Ala Ser Gln Lys Asp Phe Glu Asn Ser Met Asn Gln Val Lys

1

5

10

15

Leu Leu Lys Lys Asp Pro Gly Asn Glu Val Lys Leu Lys Leu Tyr Ala

20

25

30

Leu Tyr Lys Gln Ala Thr Glu Gly Pro Cys Asn Met Pro Lys Pro Gly

35

40

45

Val Phe Asp Leu Ile Asn Lys Ala Lys Trp Asp Ala Trp Asn Ala Leu

50

55

60

Gly Ser Leu Pro Lys Glu Ala Ala Arg Gln Asn Tyr Val Asp Leu Val

65

70

75

80

Ser Ser Leu Ser Pro Ser Leu Glu Ser Ser Ser Gln Val Glu Pro Gly

85

90

95

Thr Asp Arg Lys Ser Thr Gly Phe Glu Thr Leu Val Val Thr Ser Glu

100

105

110

Asp Gly Ile Thr Lys Ile Met Phe Asn Arg Pro Lys Lys Lys Asn Ala

115

120

125

Ile Asn Thr Glu Met Tyr His Glu Ile Met Arg Ala Leu Lys Ala Ala

130

135

140

Ser Lys Asp Asp Ser Ile Ile Thr Val Leu Thr Gly Asn Gly Asp Tyr

145

150

155

160

Tyr Ser Ser Gly Asn Asp Leu Thr Asn Phe Thr Asp Ile Pro Pro Gly

165

170

175

Gly Val Glu Glu Lys Ala Lys Asn Asn Ala Val Leu Leu Arg Glu Phe

180

185

190

Val Gly Cys Phe Ile Asp Phe Pro Lys Pro Leu Ile Ala Val Val Asn

195

200

205

Gly Pro Ala Val Gly Ile Ser Val Thr Leu Leu Gly Leu Phe Asp Ala

210

215

220

Val Tyr Ala Ser Asp Arg Ala Thr Phe His Thr Pro Phe Ser His Leu

225

230

235

240

Gly Gln Ser Pro Glu Gly Cys Ser Ser Tyr Thr Phe Pro Lys Ile Met

245

250

255

Ser Pro Ala Lys Ala Thr Glu Met Leu Ile Phe Gly Lys Lys Leu Thr

260

265

270

Ala Gly Glu Ala Cys Ala Gln Gly Leu Val Thr Glu Val Phe Pro Asp

275

280

285

Ser Thr Phe Gln Lys Glu Val Trp Thr Arg Leu Lys Ala Phe Ala Lys

290

295

300

Leu Pro Pro Asn Ala Leu Arg Ile Ser Lys Glu Val Ile Arg Lys Arg

305

310

315

320

Glu Arg Glu Lys Leu His Ala Val Asn Ala Glu Glu Cys Asn Val Leu

325

330

335

Gln Gly Arg Trp Leu Ser Asp Glu Cys Thr Asn Ala Val Val Asn Phe

340

345

350

Leu Ser Arg Lys Ser Lys Leu

355

<210> 95

<211> 359

<212> PRT

<213> Homo sapiens

<400> 95

Met Arg Ala Ser Gln Lys Asp Phe Glu Asn Ser Met Asn Gln Val Lys
1 5 10 15

Leu Leu Lys Lys Asp Pro Gly Asn Glu Val Lys Leu Lys Leu Tyr Ala
20 25 30

Leu Tyr Lys Gln Ala Thr Glu Gly Pro Cys Asn Met Pro Lys Pro Gly
35 40 45

Val Phe Asp Leu Ile Asn Lys Ala Lys Trp Asp Ala Trp Asn Ala Leu
50 55 60

Gly Ser Leu Pro Lys Glu Ala Ala Arg Gln Asn Tyr Val Asp Leu Val
65 70 75 80

Ser Ser Leu Ser Pro Ser Leu Glu Ser Ser Ser Gln Val Glu Pro Gly
85 90 95

Thr Asp Arg Lys Ser Thr Gly Phe Glu Thr Leu Val Val Thr Ser Glu
100 105 110

Asp Gly Ile Thr Lys Ile Met Phe Asn Arg Pro Lys Lys Lys Asn Ala
115 120 125

Ile Asn Thr Glu Met Tyr His Glu Ile Met Arg Ala Leu Lys Ala Ala

130	135	140	
Ser Lys Asp Asp Ser Ile Ile Thr Val Leu Thr Gly Asn Gly Asp Tyr			
145	150	155	160
Tyr Ser Ser Gly Asn Asp Leu Thr Asn Phe Thr Asp Ile Pro Pro Gly			
	165	170	175
Gly Val Glu Glu Lys Ala Lys Asn Asn Ala Val Leu Leu Arg Glu Phe			
	180	185	190
Val Gly Cys Phe Ile Asp Phe Pro Lys Pro Leu Ile Ala Val Val Asn			
	195	200	205
Gly Pro Ala Val Gly Ile Ser Val Thr Leu Leu Gly Leu Phe Asp Ala			
	210	215	220
Val Tyr Ala Ser Asp Arg Ala Thr Phe His Thr Pro Phe Ser His Leu			
225	230	235	240
Gly Gln Ser Pro Glu Gly Cys Ser Ser Tyr Thr Phe Pro Lys Ile Met			
	245	250	255
Ser Pro Ala Lys Ala Thr Glu Met Leu Ile Phe Gly Lys Lys Leu Thr			
	260	265	270
Ala Gly Glu Ala Cys Ala Gln Gly Leu Val Thr Glu Val Phe Pro Asp			
	275	280	285

Ser Thr Phe Gln Lys Glu Val Trp Thr Arg Leu Lys Ala Phe Ala Lys
290 295 300

Leu Pro Pro Asn Ala Leu Arg Ile Ser Lys Glu Val Ile Arg Lys Arg
305 310 315 320

Glu Arg Glu Lys Leu His Ala Val Asn Ala Glu Glu Cys Asn Val Leu
325 330 335

Gln Gly Arg Trp Leu Ser Asp Glu Cys Thr Asn Ala Val Val Asn Phe
340 345 350

Leu Ser Arg Lys Ser Lys Leu
355

<210> 96

<211> 282

<212> PRT

<213> Homo sapiens

<400> 96

Met Ala Ser Ser Phe Leu Pro Ala Gly Ala Ile Thr Gly Asp Ser Gly
1 5 10 15

Gly Glu Leu Ser Ser Gly Asp Asp Ser Gly Glu Val Glu Phe Pro His
20 25 30

Ser Pro Glu Ile Glu Glu Thr Ser Cys Leu Ala Glu Leu Phe Glu Lys

35

40

45

Ala Ala Ala His Leu Gln Gly Leu Ile Gln Val Ala Ser Arg Glu Gln

50

55

60

Leu Leu Tyr Leu Tyr Ala Arg Tyr Lys Gln Val Lys Val Gly Asn Cys

65

70

75

80

Asn Thr Pro Lys Pro Ser Phe Phe Asp Phe Glu Gly Lys Gln Lys Trp

85

90

95

Glu Ala Trp Lys Ala Leu Gly Asp Ser Ser Pro Ser Gln Ala Met Gln

100

105

110

Glu Tyr Ile Ala Val Val Lys Lys Leu Asp Pro Gly Trp Asn Pro Gln

115

120

125

Ile Pro Glu Lys Lys Gly Lys Glu Ala Asn Thr Gly Phe Gly Gly Pro

130

135

140

Val Ile Ser Ser Leu Tyr His Glu Glu Thr Ile Arg Glu Glu Asp Lys

145

150

155

160

Asn Ile Phe Asp Tyr Cys Arg Glu Asn Asn Ile Asp His Ile Thr Lys

165

170

175

Ala Ile Lys Ser Lys Asn Val Asp Val Asn Val Lys Asp Glu Glu Gly

180

185

190

Arg Ala Leu Leu His Trp Ala Cys Asp Arg Gly His Lys Glu Leu Val

195

200

205

Thr Val Leu Leu Gln His Arg Ala Asp Ile Asn Cys Gln Asp Asn Glu

210

215

220

Gly Gln Thr Ala Leu His Tyr Ala Ser Ala Cys Glu Phe Leu Asp Ile

225

230

235

240

Val Glu Leu Leu Leu Gln Ser Gly Ala Asp Pro Thr Leu Arg Asp Gln

245

250

255

Asp Gly Cys Leu Pro Glu Glu Val Thr Gly Cys Lys Thr Val Ser Leu

260

265

270

Val Leu Gln Arg His Thr Thr Gly Lys Ala

275

280

<210> 97

<211> 279

<212> PRT

<213> Homo sapiens

<400> 97

Met Ala Ser Ser Phe Leu Pro Ala Gly Ala Ile Thr Gly Asp Ser Gly
 1 5 10 15

Gly Glu Leu Ser Ser Gly Asp Asp Ser Gly Glu Val Glu Phe Pro His
 20 25 30

Ser Pro Glu Ile Glu Glu Thr Ser Cys Leu Ala Glu Leu Phe Glu Lys
 35 40 45

Ala Ala Ala His Leu Gln Gly Leu Ile Gln Val Ala Ser Arg Glu Gln
 50 55 60

Leu Leu Tyr Leu Tyr Ala Arg Tyr Lys Gln Val Lys Val Gly Asn Cys
 65 70 75 80

Asn Thr Pro Lys Pro Ser Phe Phe Asp Phe Glu Gly Lys Gln Lys Trp
 85 90 95

Glu Ala Trp Lys Ala Leu Gly Asp Ser Ser Pro Ser Gln Ala Met Gln
 100 105 110

Glu Tyr Ile Ala Val Val Lys Lys Leu Asp Pro Gly Trp Asn Pro Gln
 115 120 125

Ile Pro Glu Lys Lys Arg Lys Arg Ser Lys Tyr Lys Val Trp Ala Ser
 130 135 140

Tyr Phe Ser Ile Ser Arg Asn His Gln Gly Arg Asp Lys Asn Ile Phe

145 150 155 160

Asp Tyr Cys Arg Glu Asn Asn Ile Asp His Ile Thr Lys Ala Ile Lys

165 170 175

Ser Lys Asn Val Asp Val Asn Val Lys Asp Glu Glu Gly Arg Ala Leu

180 185 190

Leu His Trp Ala Cys Asp Arg Gly His Lys Glu Leu Val Thr Val Leu

195 200 205

Leu Gln His Arg Ala Asp Ile Asn Cys Gln Asp Asn Glu Gly Gln Thr

210 215 220

Ala Leu His Tyr Ala Ser Ala Cys Glu Phe Leu Asp Ile Val Glu Leu

225 230 235 240

Leu Leu Gln Ser Gly Ala Asp Pro Thr Leu Arg Asp Gln Asp Gly Cys

245 250 255

Leu Pro Glu Glu Val Thr Gly Cys Lys Thr Val Ser Leu Val Leu Gln

260 265 270

Arg His Thr Thr Gly Lys Ala

275

<210> 98

<211> 89

<212> PRT

<213> Homo sapiens

<400> 98

Thr Ala Ser Thr Thr Pro Cys Ala Lys Trp Ser Ser Ser Cys Ala Ala

1

5

10

15

Leu Lys Gln Leu Lys Gly Pro Val Ser Asp Gln Glu Lys Leu Leu Val

20

25

30

Tyr Gly Leu Tyr Lys Gln Ala Thr Gln Gly Asp Cys Asp Ile Pro Gly

35

40

45

Pro Pro Ala Ser Asp Val Arg Ala Arg Ala Lys Trp Glu Ala Trp Ser

50

55

60

Ala Asn Lys Gly Ala Ser Lys Met Asp Ala Met Arg Gly Tyr Ala Ala

65

70

75

80

Lys Val Glu Glu Leu Thr Lys Lys Glu

85

<210> 99

<211> 104

<212> PRT

<213> Homo sapiens

<400> 99

Met Trp Gly Asp Leu Trp Leu Leu Pro Pro Ala Ser Ala Asn Pro Gly

1 5 10 15

Thr Gly Thr Glu Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His

20 25 30

Leu Lys Thr Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His

35 40 45

Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met

50 55 60

Leu Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys

65 70 75 80

Gly Thr Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu

85 90 95

Glu Leu Lys Lys Lys Tyr Gly Ile

100

<210> 100

<211> 86

<212> PRT

<213> Homo sapiens

<400> 100

Met Ser Gln Ala Phe Glu Lys Ala Ala Lys Asp Ile Lys His Leu Glu

1 5 10 15

Thr Lys Pro Ala Asp Asp Glu Arg Met Phe Ile Tyr Ser Arg Cys Lys

20 25 30

Gln Ala Thr Val His Asp Leu Asn Thr Glu Trp Pro Arg Met Leu Asp

35 40 45

Leu Lys Gly Lys Ala Lys Gln Asp Ala Trp Asn Glu Leu Lys Asp Thr

50 55 60

Ala Lys Glu Asp Ala Val Lys Ala Asp Ile Asn Lys Val Glu Glu Arg

65 70 75 80

Asn Lys Lys Tyr Arg Ile

85

<210> 101

<211> 138

<212> PRT

<213> Homo sapiens

<400> 101

Met Ala Lys Pro Ile Ser Thr Lys Asn Thr Lys Ile Ser Arg His Gly

1

5

10

15

Trp His Ala Ala Val Ile Thr Ala Ala Arg Glu Ala Glu Ala Glu Asn

20

25

30

His Leu Ser Trp Glu Glu Lys Lys Lys Lys Lys Arg Cys Ala Gly Ile

35

40

45

Lys His Phe Lys Thr Lys Pro Ala Asp Asp Glu Met Arg Phe Leu Tyr

50

55

60

Gly His Tyr Lys Arg Ala Thr Val Gly Asn Ile Lys Thr Glu Arg Pro

65

70

75

80

Gly Met Val Asp Phe Lys Gly Lys Ala Lys Trp Asp Pro Trp Asn Leu

85

90

95

Val Lys Gly Ala Ala Arg Glu Asp Pro Met Lys Ala Lys Ala Tyr Val

100

105

110

Lys Lys Val Glu Glu Leu Lys Lys Lys Phe Arg Ile Arg Glu Thr Gly

115

120

125

Ile Val Ala Ser His Ala Phe Val Leu Asn

130

135

<210> 102

<211> 96

<212> PRT

<213> Homo sapiens

<400> 102

Met Leu Leu Leu Phe Val Cys Leu Phe Phe Leu Lys Ala Asp Phe Asp

1

5

10

15

Arg Ala Ala Glu Asp Val Arg Lys Leu Lys Ala Arg Pro Asp Asp Gly

20

25

30

Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys Gln Ala Ile Val Gly Asp

35

40

45

Ile Asn Ile Ala Cys Pro Gly Met Leu Asp Leu Lys Gly Lys Ala Lys

50

55

60

Trp Glu Ala Trp Asn Leu Lys Lys Gly Leu Ser Thr Glu Asp Ala Thr

65

70

75

80

Ser Ala Tyr Ile Ser Lys Ala Lys Glu Leu Ile Glu Lys Tyr Gly Ile

85

90

95

<210> 103

<211> 88

<212> PRT

<213> Homo sapiens

<400> 103

Met Ser Leu Gln Ala Asp Phe Asp Met Val Thr Glu Asp Val Arg Lys

1

5

10

15

Leu Lys Thr Arg Pro Asp Asp Glu Glu Leu Lys Glu Leu Tyr Gly Leu

20

25

30

Tyr Lys Gln Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met

35

40

45

Leu Glu Leu Lys Gly Lys Ala Lys Trp Glu Ala Gln Asn Pro Gln Lys

50

55

60

Gly Leu Ser Glu Glu Asp Met Met Arg Ala Phe Ile Ser Lys Ala Glu

65

70

75

80

Glu Leu Ile Glu Lys Tyr Gly Ile

85

<210> 104

<211> 86

<212> PRT

<213> Homo sapiens

<400> 104

Met Ala Leu Gln Ala Glu Phe Asp Lys Ala Ala Glu Asp Val Arg Lys

1 5 10 15

Leu Pro Thr Arg Pro Ala Asp Asn Lys Glu Leu Lys Lys Leu Asp Gly

20 25 30

Leu Tyr Lys Gln Ala Ile Ile Gly Asp Ile Asn Ile Glu Tyr Leu Gly

35 40 45

Met Leu Asp Phe Lys Gly Lys Ala Lys Cys Ala Ala Trp Thr Leu Gln

50 55 60

Lys Arg Leu Ser Lys Glu Asp Ala Thr Ser Val Ser Ile Ser Lys Ala

65 70 75 80

Lys Glu Pro Ile Glu Lys

85

<210> 105

<211> 282

<212> PRT

<213> Homo sapiens

<400> 105

Met Ala Ser Ser Phe Leu Pro Ala Gly Ala Ile Thr Gly Asp Ser Gly

1	5	10	15
Gly Glu Leu Ser Ser Gly Asp Asp Ser Gly Glu Val Glu Phe Pro His			
20	25	30	
Ser Pro Glu Ile Glu Glu Thr Ser Cys Leu Ala Glu Leu Phe Glu Lys			
35	40	45	
Ala Ala Ala His Leu Gln Gly Leu Ile Gln Val Ala Ser Arg Glu Gln			
50	55	60	
Leu Leu Tyr Leu Tyr Ala Arg Tyr Lys Gln Val Lys Val Gly Asn Cys			
65	70	75	80
Asn Thr Pro Lys Pro Ser Phe Phe Asp Phe Glu Gly Lys Gln Lys Trp			
85	90	95	
Glu Ala Trp Lys Ala Leu Gly Asp Ser Ser Pro Ser Gln Ala Met Gln			
100	105	110	
Glu Tyr Ile Ala Val Val Lys Lys Leu Asp Pro Gly Trp Asn Pro Gln			
115	120	125	
Ile Pro Glu Lys Lys Gly Lys Glu Ala Asn Thr Gly Phe Gly Gly Pro			
130	135	140	
Val Ile Ser Ser Leu Tyr His Glu Glu Thr Ile Arg Glu Glu Asp Lys			
145	150	155	160

Asn Ile Phe Asp Tyr Cys Arg Glu Asn Asn Ile Asp His Ile Thr Lys

165

170

175

Ala Ile Lys Ser Lys Asn Val Asp Val Asn Val Lys Asp Glu Glu Gly

180

185

190

Arg Ala Leu Leu His Trp Ala Cys Asp Arg Gly His Lys Glu Leu Val

195

200

205

Thr Val Leu Leu Gln His Arg Ala Asp Ile Asn Cys Gln Asp Asn Glu

210

215

220

Gly Gln Thr Ala Leu His Tyr Ala Ser Ala Cys Glu Phe Leu Asp Ile

225

230

235

240

Val Glu Leu Leu Leu Gln Ser Gly Ala Asp Pro Thr Leu Arg Asp Gln

245

250

255

Asp Gly Cys Leu Pro Glu Glu Val Thr Gly Cys Lys Thr Val Ser Leu

260

265

270

Val Leu Gln Arg His Thr Thr Gly Lys Ala

275

280

<210> 106

<211> 359

<212> PRT

<213> Homo sapiens

<400> 106

Met Arg Ala Ser Gln Lys Asp Phe Glu Asn Ser Met Asn Gln Val Lys

1 5 10 15

Leu Leu Lys Lys Asp Pro Gly Asn Glu Val Lys Leu Lys Leu Tyr Ala

20 25 30

Leu Tyr Lys Gln Ala Thr Glu Gly Pro Cys Asn Met Pro Lys Pro Gly

35 40 45

Val Phe Asp Leu Ile Asn Lys Ala Lys Trp Asp Ala Trp Asn Ala Leu

50 55 60

Gly Ser Leu Pro Lys Glu Ala Ala Arg Gln Asn Tyr Val Asp Leu Val

65 70 75 80

Ser Ser Leu Ser Pro Ser Leu Glu Ser Ser Ser Gln Val Glu Pro Gly

85 90 95

Thr Asp Arg Lys Ser Thr Gly Phe Glu Thr Leu Val Val Thr Ser Glu

100 105 110

Asp Gly Ile Thr Lys Ile Met Phe Asn Arg Pro Lys Lys Lys Asn Ala

115 120 125

Ile Asn Thr Glu Met Tyr His Glu Ile Met Arg Ala Leu Lys Ala Ala

130

135

140

Ser Lys Asp Asp Ser Ile Ile Thr Val Leu Thr Gly Asn Gly Asp Tyr

145

150

155

160

Tyr Ser Ser Gly Asn Asp Leu Thr Asn Phe Thr Asp Ile Pro Pro Gly

165

170

175

Gly Val Glu Glu Lys Ala Lys Asn Asn Ala Val Leu Leu Arg Glu Phe

180

185

190

Val Gly Cys Phe Ile Asp Phe Pro Lys Pro Leu Ile Ala Val Val Asn

195

200

205

Gly Pro Ala Val Gly Ile Ser Val Thr Leu Leu Gly Leu Phe Asp Ala

210

215

220

Val Tyr Ala Ser Asp Arg Ala Thr Phe His Thr Pro Phe Ser His Leu

225

230

235

240

Gly Gln Ser Pro Glu Gly Cys Ser Ser Tyr Thr Phe Pro Lys Ile Met

245

250

255

Ser Pro Ala Lys Ala Thr Glu Met Leu Ile Phe Gly Lys Lys Leu Thr

260

265

270

Ala Gly Glu Ala Cys Ala Gln Gly Leu Val Thr Glu Val Phe Pro Asp

275

280

285

Ser Thr Phe Gln Lys Glu Val Trp Thr Arg Leu Lys Ala Phe Ala Lys

290

295

300

Leu Pro Pro Asn Ala Leu Arg Ile Ser Lys Glu Val Ile Arg Lys Arg

305

310

315

320

Glu Arg Glu Lys Leu His Ala Val Asn Ala Glu Glu Cys Asn Val Leu

325

330

335

Gln Gly Arg Trp Leu Ser Asp Glu Cys Thr Asn Ala Val Val Asn Phe

340

345

350

Leu Ser Arg Lys Ser Lys Leu

355

<210> 107

<211> 530

<212> PRT

<213> Homo sapiens

<400> 107

Met Phe Gln Phe His Ala Gly Ser Trp Glu Ser Trp Cys Cys Cys Cys

1

5

10

15

Leu Ile Pro Ala Asp Arg Pro Trp Asp Arg Gly Gln His Trp Gln Leu

20	25	30
Glu Met Ala Asp Thr Arg Ser Val His Glu Thr Arg Phe Glu Ala Ala		
35	40	45
Val Lys Val Ile Gln Ser Leu Pro Lys Asn Gly Ser Phe Gln Pro Thr		
50	55	60
Asn Glu Met Met Leu Lys Phe Tyr Ser Phe Tyr Lys Gln Ala Thr Glu		
65	70	75
Gly Pro Cys Lys Leu Ser Arg Pro Gly Phe Trp Asp Pro Ile Gly Arg		
85	90	95
Tyr Lys Trp Asp Ala Trp Ser Ser Leu Gly Asp Met Thr Lys Glu Glu		
100	105	110
Ala Met Ile Ala Tyr Val Glu Glu Met Lys Lys Ile Ile Glu Thr Met		
115	120	125
Pro Met Thr Glu Lys Val Glu Glu Leu Leu Arg Val Ile Gly Pro Phe		
130	135	140
Tyr Glu Ile Val Glu Asp Lys Lys Ser Gly Arg Ser Ser Asp Ile Thr		
145	150	155
Ser Val Arg Leu Glu Lys Ile Ser Lys Cys Leu Glu Asp Leu Gly Asn		
165	170	175

Val Leu Thr Ser Thr Pro Asn Ala Lys Thr Val Asn Gly Lys Ala Glu

180

185

190

Ser Ser Asp Ser Gly Ala Glu Ser Glu Glu Glu Glu Ala Gln Glu Glu

195

200

205

Val Lys Gly Ala Glu His Ser Asp Asn Asp Lys Lys Met Met Lys Lys

210

215

220

Ser Ala Asp His Lys Asn Leu Glu Val Ile Val Thr Asn Gly Tyr Asp

225

230

235

240

Lys Asp Gly Phe Val Gln Asp Ile Gln Asn Asp Ile His Ala Ser Ser

245

250

255

Ser Leu Asn Gly Arg Ser Thr Glu Glu Val Lys Pro Ile Asp Glu Asn

260

265

270

Leu Gly Gln Thr Gly Lys Ser Ala Val Cys Ile His Gln Gly Ile Asn

275

280

285

Asp Asp His Val Glu Asp Val Thr Gly Ile Gln His Leu Thr Ser Asp

290

295

300

Ser Asp Ser Glu Val Tyr Cys Asp Ser Met Glu Gln Phe Gly Gln Glu

305

310

315

320

Glu Ser Leu Asp Ser Phe Thr Ser Asn Asn Gly Pro Phe Gln Tyr Tyr
325 330 335

Leu Gly Gly His Ser Ser Gln Pro Met Glu Asn Ser Gly Phe Arg Glu
340 345 350

Asp Ile Gln Val Pro Pro Gly Asn Gly Asn Ile Gly Asn Met Gln Val
355 360 365

Val Ala Val Glu Gly Lys Gly Glu Val Lys His Gly Gly Glu Asp Gly
370 375 380

Arg Asn Asn Ser Gly Ala Pro His Arg Glu Lys Arg Gly Gly Glu Thr
385 390 395 400

Asp Glu Phe Ser Asn Val Arg Arg Gly Arg Gly His Arg Met Gln His
405 410 415

Leu Ser Glu Gly Thr Lys Gly Arg Gln Val Gly Ser Gly Gly Asp Gly
420 425 430

Glu Arg Trp Gly Ser Asp Arg Gly Ser Arg Gly Ser Leu Asn Glu Gln
435 440 445

Ile Ala Leu Val Leu Met Arg Leu Gln Glu Asp Met Gln Asn Val Leu
450 455 460

Gln Arg Leu Gln Lys Leu Glu Thr Leu Thr Ala Ala Lys Ser Ser Thr

465 470 475 480

Ser Thr Leu Gln Thr Ala Pro Gln Pro Thr Ser Ser Gln Arg Pro Ser

485 490 495

Trp Trp Pro Phe Glu Met Ser Pro Gly Val Leu Thr Phe Ala Ile Ile

500 505 510

Trp Pro Phe Ile Ala Gln Trp Leu Val Tyr Leu Tyr Tyr Gln Arg Arg

515 520 525

Arg Arg

530

<210> 108

<211> 20

<212> PRT

<213> Homo sapiens

<400> 108

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp

1 5 10 15

Phe Thr Gly Lys

20

<210> 109

<211> 20

<212> PRT

<213> Homo sapiens

<400> 109

Arg Ala Thr Val Gly Asn Ile Lys Thr Glu Arg Pro Gly Met Val Asp

1

5

10

15

Phe Lys Gly Lys

20

<210> 110

<211> 20

<212> PRT

<213> Homo sapiens

<400> 110

Gln Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met Leu Glu

1

5

10

15

Leu Lys Gly Lys

20

<210> 111

<211> 20

<212> PRT

<213> Homo sapiens

<400> 111

Gln Ala Ile Ile Gly Asp Ile Asn Ile Glu Tyr Leu Gly Met Leu Asp

1

5

10

15

Phe Lys Gly Lys

20

<210> 112

<211> 20

<212> PRT

<213> Homo sapiens

<400> 112

Gln Ala Ile Val Gly Asp Ile Asn Ile Ala Cys Pro Gly Met Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 113

<211> 20

<212> PRT

<213> Homo sapiens

<400> 113

Gln Ala Thr Val His Asp Leu Asn Thr Glu Trp Pro Arg Met Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 114

<211> 20

<212> PRT

<213> Homo sapiens

<400> 114

Gln Val Lys Val Gly Asn Cys Asn Thr Pro Lys Pro Ser Phe Phe Asp

1

5

10

15

Phe Glu Gly Lys

20

<210> 115

<211> 20

<212> PRT

<213> Homo sapiens

<400> 115

Gln Ala Thr Glu Gly Pro Cys Asn Met Pro Lys Pro Gly Val Phe Asp

1

5

10

15

Leu Ile Asn Lys

20

<210> 116

<211> 20

<212> PRT

<213> Homo sapiens

<400> 116

Gln Ala Thr Glu Gly Pro Cys Lys Leu Ser Arg Pro Gly Phe Trp Asp

1

5

10

15

Pro Ile Gly Arg

20

<210> 117

<211> 20

<212> PRT

<213> Homo sapiens

<400> 117

Gln Ala Thr Gln Gly Asp Cys Asp Ile Pro Gly Pro Pro Ala Ser Asp

1

5

10

15

Val Arg Ala Arg

20

<210> 118

<211> 18

<212> PRT

<213> Homo sapiens

<400> 118

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp

1

5

10

15

Phe Thr

<210> 119

<211> 18

<212> PRT

<213> Homo sapiens

<400> 119

Gln Ala Thr Val Gly Asp Val Asn Thr Asp Arg Pro Gly Leu Leu Asp

1

5

10

15

Leu Lys

<210> 120

<211> 18

<212> PRT

<213> Homo sapiens

<400> 120

Arg Ala Thr Val Gly Asn Ile Lys Thr Glu Arg Pro Gly Met Val Asp

1

5

10

15

Phe Lys

<210> 121

<211> 32

<212> PRT

<213> Bos taurus

<400> 121

Ile Tyr Ser His Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1

5

10

15

Arg Pro Gly Met Leu Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp

20

25

30

<210> 122

<211> 32

<212> PRT

<213> Homo sapiens

<400> 122

Ile Tyr Gly His Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1

5

10

15

Arg Pro Gly Met Leu Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp

20

25

30

<210> 123

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 123

Leu Tyr Ser Leu Tyr Lys Gln Ala Thr Val Gly Asp Cys Asn Thr Asp

1

5

10

15

Lys Pro Gly Phe Leu Asp Phe Lys Gly Lys Ala Lys Trp Glu Ala Trp

20

25

30

<210> 124

<211> 32

<212> PRT

<213> Gallus gallus

<400> 124

Val Tyr Ser His Tyr Lys Gln Ala Thr Val Gly Asp Val Asn Thr Asp

1

5

10

15

Arg Pro Gly Met Leu Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp

20

25

30

<210> 125

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
construct; chemically synthesized

<400> 125

Ile Tyr Ser His Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1 5 10 15

Arg Pro Gly Met Leu Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp

20 25 30

<210> 126

<211> 32

<212> PRT

<213> Homo sapiens

<400> 126

Ile Tyr Gly His Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1 5 10 15

Arg Pro Gly Met Leu Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp

20 25 30

<210> 127

<211> 32

<212> PRT

<213> turtle

<400> 127

Ile Tyr Ser His Phe Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1

5

10

15

Arg Pro Gly Phe Leu Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp

20

25

30

<210> 128

<211> 32

<212> PRT

<213> mallard

<400> 128

Val Tyr Ser His Tyr Lys Gln Ala Thr Val Gly Asp Val Asn Thr Asp

1

5

10

15

Arg Pro Gly Met Leu Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp

20

25

30

<210> 129

<211> 32

<212> PRT

<213> Mus musculus

<400> 129

Ile Tyr Ser His Phe Lys Gln Ala Thr Val Gly Asp Val Asn Thr Asp

1

5

10

15

Arg Pro Gly Leu Leu Asp Leu Lys Gly Lys Ala Lys Trp Asp Ser Trp

20

25

30

<210> 130

<211> 32

<212> PRT

<213> Sus scrofa

<400> 130

Ile Tyr Ser His Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1 5 10 15

Arg Pro Gly Ile Leu Asp Leu Lys Gly Lys Ala Lys Trp Asp Ala Trp

20 25 30

<210> 131

<211> 32

<212> PRT

<213> Bos taurus

<400> 131

Ile Tyr Ser His Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1 5 10 15

Arg Pro Gly Met Leu Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp

20 25 30

<210> 132

<211> 32

<212> PRT

<213> Homo sapiens

<400> 132

Ile Tyr Gly His Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1 5 10 15

Arg Pro Gly Met Leu Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp

20 25 30

<210> 133

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
construct; chemically synthesized

<400> 133

Ile Tyr Ser His Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1 5 10 15

Arg Pro Gly Met Leu Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp

20

25

30

<210> 134

<211> 32

<212> PRT

<213> Homo sapiens

<400> 134

Ile Tyr Gly His Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1

5

10

15

Arg Pro Gly Met Leu Asp Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp

20

25

30

<210> 135

<211> 32

<212> PRT

<213> Anas platyrhynchos

<400> 135

Leu Tyr Gly Phe Tyr Lys Gln Ala Thr Val Gly Asp Ile Asn Ile Glu

1

5

10

15

Cys Pro Gly Met Leu Asp Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp

20

25

30

<210> 136

<211> 32

<212> PRT

<213> turtle

<400> 136

Ile Tyr Ser His Phe Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu

1

5

10

15

Arg Pro Gly Phe Leu Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp

20

25

30

<210> 137

<211> 20

<212> PRT

<213> Homo sapiens

<400> 137

Gln Ser Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 138

<211> 20

<212> PRT

<213> Homo sapiens

<400> 138

Gln Ala Ser Val Gly Asp Asn Asp Thr Ala Lys Pro Gly Leu Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 139

<211> 20

<212> PRT

<213> Homo sapiens

<400> 139

Gln Ala Ser Val Gly Asp Asn Asp Thr Ala Lys Pro Gly Leu Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 140

<211> 20

<212> PRT

<213> Homo sapiens

<400> 140

Gln Ala Thr Val Gly Asp Asn Asn Thr Glu Lys Pro Gly Leu Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 141

<211> 20

<212> PRT

<213> Bos taurus

<400> 141

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp

1

5

10

15

Phe Lys Gly Lys

20

<210> 142

<211> 20

<212> PRT

<213> Mus musculus

<400> 142

Gln Ala Thr Val Gly Asp Val Asn Thr Asp Arg Pro Gly Leu Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 143

<211> 20

<212> PRT

<213> Rattus norvegicus

<400> 143

Gln Ala Thr Val Gly Asp Val Asn Thr Asp Arg Pro Gly Leu Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 144

<211> 20

<212> PRT

<213> Sus scrofa

<400> 144

Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Ile Leu Asp

1

5

10

15

Leu Lys Gly Lys

20

<210> 145

<211> 20

<212> PRT

<213> Bos taurus

<400> 145

Gln Ala Thr Glu Gly Pro Cys Lys Leu Ser Lys Pro Gly Phe Trp Asp

1

5

10

15

Pro Val Gly Arg

20

<210> 146

<211> 20

<212> PRT

<213> *Cyprinus carpio*

<400> 146

Gln Ala Thr Gln Gly Pro Cys Asn Thr Pro Lys Pro Ser Met Leu Asp

1

5

10

15

Phe Val Asn Lys

20

<210> 147

<211> 20

<212> PRT

<213> *Mus musculus*

<400> 147

Gln Ala Thr Glu Gly Thr Cys Asn Met Pro Lys Pro Gly Met Leu Asp

1

5

10

15

Phe Val Asn Lys

<210> 148

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (2)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (3)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (6)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (7)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (10)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (11)

<223> wherein Xaa is Arg or Lys

<220>

<221> VARIANT

<222> (13)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (14)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (15)

<223> wherein Xaa is any amino acid

<220>

<221> VARIANT

<222> (18)

<223> wherein Xaa is any amino acid

<400> 148

Gln Xaa Xaa Val Gly Xaa Xaa Asn Thr Xaa Xaa Pro Xaa Xaa Xaa Asp

1

5

10

15

Phe Xaa Gly Lys

20

<210> 149

<211> 89

<212> PRT

<213> Homo sapiens

<400> 149

Thr Ala Ser Thr Thr Pro Cys Ala Lys Trp Ser Ser Ser Cys Ala Ala

1

5

10

15

Leu Lys Gln Leu Lys Gly Pro Val Ser Asp Gln Glu Lys Leu Leu Val

20

25

30

Tyr Gly Leu Tyr Lys Gln Ala Thr Gln Gly Asp Cys Asp Ile Pro Gly

35

40

45

Pro Pro Ala Ser Asp Val Arg Ala Arg Ala Lys Trp Glu Ala Trp Ser

50

55

60

Ala Asn Lys Gly Ala Ser Lys Met Asp Ala Met Arg Gly Tyr Ala Ala

65

70

75

80

Lys Val Glu Glu Leu Thr Lys Lys Glu

85

<210> 150

<211> 228

<212> PRT

<213> Homo sapiens

<400> 150

Met Gly Asp Ala Gly Ala Thr Ala Ala Ala Leu Arg Pro Ala His Asn

1

5

10

15

Leu Arg Pro Ala Pro Pro Thr Ala Ser Ala Ala His Ala Gln Ser Ser

20

25

30

Arg Thr Ser Ala Pro Ser Ala Gln Arg Arg Leu Pro Ala Glu Pro Ser

35

40

45

His Gln Pro Ser Ala Pro Gly Thr Ala Ser Thr Thr Pro Cys Ala Lys

50

55

60

Trp Ser Ser Ser Cys Ala Ala Leu Lys Gln Leu Lys Gly Pro Val Ser

65

70

75

80

Asp Gln Glu Lys Leu Leu Val Tyr Gly Leu Tyr Lys Gln Ala Thr Gln
85 90 95

Gly Asp Cys Asp Ile Pro Gly Pro Pro Ala Ser Asp Val Arg Ala Arg
100 105 110

Ala Lys Trp Glu Ala Trp Ser Ala Asn Lys Gly Ala Ser Lys Met Asp
115 120 125

Ala Met Arg Gly Tyr Ala Ala Lys Val Glu Glu Leu Thr Lys Lys Glu
130 135 140

Val Gly Gly Val Glu Arg Glu Gln Arg Gly Val Gln Asp Gly Arg His
145 150 155 160

Glu Gly Leu Arg Gly Gln Ser Gly Gly Ala Asp Glu Glu Gly Arg Ala
165 170 175

Ser Lys Met Asp Ala Met Arg Gly Tyr Ala Ala Lys Val Glu Glu Leu
180 185 190

Thr Lys Lys Glu Val Gly Gly Val Glu Arg Glu Gln Arg Gly Val Gln
195 200 205

Asp Gly Arg His Glu Gly Leu Arg Gly Gln Ser Glu Glu Met Arg Lys
210 215 220

Lys Glu Ala Gly

225

<210> 151

<211> 191

<212> PRT

<213> Homo sapiens

<400> 151

Met Gly Asp Ala Gly Ala Thr Ala Ala Ala Leu Arg Pro Ala His Asn

1

5

10

15

Leu Arg Pro Ala Pro Pro Thr Ala Ser Ala Ala His Ala Ser Pro His

20

25

30

Glu Arg Ala Arg Gln Ala Ser Arg Ala Phe Arg Gln Ser Pro Pro Thr

35

40

45

Ser Pro Gln Leu Leu Ala Pro Gly Thr Ala Ser Thr Thr Pro Cys Ala

50

55

60

Lys Trp Ser Ser Ser Cys Ala Ala Leu Lys Gln Leu Lys Gly Pro Val

65

70

75

80

Ser Asp Gln Glu Lys Leu Leu Val Tyr Gly Leu Tyr Lys Gln Ala Thr

85

90

95

Gln Gly Asp Cys Asp Ile Pro Gly Pro Pro Ala Ser Asp Val Arg Ala

100	105	110	
Arg Ala Lys Trp Glu Ala Trp Ser Ala Lys Lys Gly Ala Ser Lys Met			
115	120	125	
Asp Ala Met Arg Gly Tyr Ala Ala Lys Val Glu Glu Leu Thr Lys Lys			
130	135	140	
Glu Val Gly Gly Val Glu Arg Glu Gln Arg Gly Val Gln Asp Gly Arg			
145	150	155	160
His Glu Gly Leu Arg Gly Gln Ser Gly Gly Ala Asp Glu Glu Gly Ser			
165	170	175	
Gly Gly Arg Gly Ala Arg Thr Lys Gly Arg Pro Arg Trp Thr Pro			
180	185	190	

<210> 152

<211> 687

<212> DNA

<213> Homo sapiens

<400> 152

```

atgggagacg caggagccac ggcggccgcg cttaggcctg ctcacaacct ccgcccggcc 60
ccgcccacag cctccgcgcg gcacgcgcag tcctcacgaa cgagcgcgcc aagcgcacag 120
cgccgccttc cggcagagcc ctcccaccag ccctcagcac cagggaccgc ctccaccacc 180
ccatgtgcca agtggagttc gagctgcgcg gccctcaagc agctgaaggg tcccgtgagc 240
gatcaggaga agctgctggt ctacggcttg taaaacagg ccaccaggg cgactgcgac 300
atccccggcc ctccggcctc agacgtgaga gccagggcca agtgggaggc ttggagcgcg 360

```

aacaaagggg cgtccaagat ggacgccatg aggggctacg cggccaaagt ggaggagctg 420
acgaagaagg aagtgggggg cgtggagcgc gaacaaaggg gcgtgcaaga tggacgccat 480
gaggggctac gcggccaaag tggaggagct gacgaagaag gaagggcgctc caagatggac 540
gccatgaggg gctacgcggc caaagtggag gagctgacga agaaggaagt ggggggcgtg 600
gagcgcgaac aaaggggcgt ccaagatgga cgccatgagg ggctacgcgg ccagagtgag 660
gagatgagga agaaggaggc tggctga 687

<210> 153

<211> 99

<212> PRT

<213> Homo sapiens

<400> 153

Met	Cys	Gln	Val	Glu	Phe	Glu	Leu	Arg	Gly	Pro	Gln	Ala	Ala	Glu	Gly
1				5					10					15	
Ser	Arg	Glu	Arg	Ser	Gly	Glu	Ala	Ala	Gly	Leu	Arg	Leu	Val	Gln	Thr
		20						25					30		
Gly	His	Pro	Gly	Arg	Leu	Arg	His	Pro	Arg	Pro	Ser	Gly	Leu	Arg	Arg
		35					40					45			
Glu	Ser	Gln	Gly	Gln	Val	Gly	Gly	Leu	Glu	Arg	Glu	Gln	Arg	Gly	Val
	50					55				60					
Gln	Asp	Gly	Arg	His	Glu	Gly	Leu	Arg	Gly	Gln	Ser	Gly	Gly	Ala	Asp
65					70					75					80
Glu	Glu	Gly	Ser	Gly	Gly	Arg	Gly	Ala	Arg	Thr	Lys	Gly	Arg	Ala	Arg
				85					90					95	
Trp	Thr	Pro													

<210> 154

<211> 99

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (61)

<223> wherein Xaa is any amino acid

<400> 154

Met Cys Gln Val Glu Phe Glu Leu Arg Gly Pro Gln Ala Ala Glu Gly
1 5 10 15
Ser Arg Glu Arg Ser Gly Glu Ala Ala Gly Leu Arg Leu Val Gln Thr
20 25 30
Gly His Pro Gly Arg Leu Arg His Pro Arg Pro Ser Gly Leu Arg Arg
35 40 45
Glu Ser Gln Gly Gln Val Gly Gly Leu Glu Arg Glu Xaa Arg Gly Val
50 55 60
Gln Asp Gly Arg His Glu Gly Leu Arg Gly Gln Ser Gly Gly Ala Asp
65 70 75 80
Glu Glu Gly Ser Gly Gly Arg Gly Ala Arg Thr Lys Gly Arg Ala Arg
85 90 95
Trp Thr Pro

<210> 155

<211> 66

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (25)

<223> wherein Xaa is any amino acid

<400> 155

Met Cys Gln Val Glu Phe Glu Leu Ala His Thr Ala Leu Lys Gln Leu
1 5 10 15
Lys Gly Thr Val Cys Asp Gln Glu Xaa Thr Ala Gly Val Gln Leu Leu
20 25 30

Gln Thr Ala His Pro Glu Arg Leu Gln His Pro Cys Pro Phe Ser Leu
35 40 45

Arg Cys Glu Ser Gln Gly Gln Val Gly Gly Met Glu Cys Glu Gln Arg
50 55 60

Asp Val
65

<210> 156

<211> 687

<212> DNA

<213> Homo sapiens

<400> 156

atgggagacg caggagccac ggcggccgcg cttaggcctg ctcacaacct ccgcccggcc 60
ccgcccacag cctccgccgc gcacgcgcag tcttcacgaa cgagcgcgcc aagcgcacag 120
cgccgccttc cggcagagcc ctcccaccag ccctcagcac cagggaccgc ctccaccacc 180
ccatgtgcca agtggagttc gagctgcgcg gccctcaagc agctgaaggg tcccgtgagc 240
gatcaggaga agctgctggt ctacggcttg tacaacaggg ccacccaggg cgactgcgac 300
atccccggcc ctccggcctc agacgtgaga gccagggcca agtgggagggc ttggagcgcg 360
aacaaggggg cgtccaagat ggacgccatg aggggctacg cggccaaagt ggaggagctg 420
acgaagaagg aagtgggggg cgtggagcgc gaacaaaggg gcgtgcaaga tggacgccat 480
gaggggctac gcggccaaag tggaggagct gacgaagaag gaagggcgtc caagatggac 540
gccatgaggg gctacgcggc caaagtggag gagctgacga agaaggaagt ggggggcgtg 600
gagcgcgaac aaaggggcgt ccaagatgga cgccatgagg ggctacgcgg ccagagtgag 660
gagatgagga agaaggagggc tggctga 687

<210> 157

<211> 228

<212> PRT

<213> Homo sapiens

<400> 157

Met Gly Asp Ala Gly Ala Thr Ala Ala Ala Leu Arg Pro Ala His Asn

1	5	10	15
Leu Arg Pro Ala Pro Pro Thr Ala Ser Ala Ala His Ala Gln Ser Ser	20	25	30
Arg Thr Ser Ala Pro Ser Ala Gln Arg Arg Leu Pro Ala Glu Pro Ser	35	40	45
His Gln Pro Ser Ala Pro Gly Thr Ala Ser Thr Thr Pro Cys Ala Lys	50	55	60
Trp Ser Ser Ser Cys Ala Ala Leu Lys Gln Leu Lys Gly Pro Val Ser	65	70	75
Asp Gln Glu Lys Leu Leu Val Tyr Gly Leu Tyr Lys Gln Ala Thr Gln	85	90	95
Gly Asp Cys Asp Ile Pro Gly Pro Pro Ala Ser Asp Val Arg Ala Arg	100	105	110
Ala Lys Trp Glu Ala Trp Ser Ala Asn Lys Gly Ala Ser Lys Met Asp	115	120	125
Ala Met Arg Gly Tyr Ala Ala Lys Val Glu Glu Leu Thr Lys Lys Glu	130	135	140
Val Gly Gly Val Glu Arg Glu Gln Arg Gly Val Gln Asp Gly Arg His	145	150	155
Glu Gly Leu Arg Gly Gln Ser Gly Gly Ala Asp Glu Glu Gly Arg Ala	165	170	175
Ser Lys Met Asp Ala Met Arg Gly Tyr Ala Ala Lys Val Glu Glu Leu	180	185	190
Thr Lys Lys Glu Val Gly Gly Val Glu Arg Glu Gln Arg Gly Val Gln	195	200	205
Asp Gly Arg His Glu Gly Leu Arg Gly Gln Ser Glu Glu Met Arg Lys	210	215	220
Lys Glu Ala Gly	225		

<210> 158

<211> 87

<212> PRT

<213> Bos taurus

<400> 158

Met Cys Gln Val Glu Phe Glu Met Ala Cys Ala Ala Ile Lys Gln Leu

1	5	10	15
Lys Gly Pro Val Ser Asp Gln Glu Lys Leu Leu Val Tyr Ser Tyr Tyr	20	25	30
Lys Gln Ala Thr Gln Gly Asp Cys Asn Ile Pro Ala Pro Pro Ala Thr	35	40	45
Asp Leu Lys Ala Lys Ala Lys Trp Glu Ala Trp Asn Glu Asn Lys Gly	50	55	60
Met Ser Lys Met Asp Ala Met Arg Ile Tyr Ile Ala Lys Val Glu Glu	65	70	75
Leu Lys Lys Asn Glu Ala Gly	85		

<210> 159

<211> 87

<212> PRT

<213> Mus musculus

<400> 159

Met Ser Gln Val Glu Phe Glu Met Ala Cys Ala Ser Leu Lys Gln Leu	1	5	10	15
Lys Gly Pro Val Ser Asp Gln Glu Lys Leu Leu Val Tyr Ser Phe Tyr	20	25	30	
Lys Gln Ala Thr Gln Gly Asp Cys Asn Ile Pro Val Pro Pro Ala Thr	35	40	45	
Asp Val Arg Ala Lys Ala Lys Tyr Glu Ala Trp Met Val Asn Lys Gly	50	55	60	
Met Ser Lys Met Asp Ala Met Arg Ile Tyr Ile Ala Lys Val Glu Glu	65	70	75	80
Leu Lys Lys Lys Glu Pro Cys	85			

<210> 160

<211> 87

<212> PRT

<213> Rattus norvegicus

<400> 160

Met Ser Gln Val Glu Phe Glu Met Ala Cys Ala Ser Leu Lys Gln Leu
1 5 10 15
Lys Gly Pro Leu Ser Asp Gln Glu Lys Leu Leu Val Tyr Ser Phe Tyr
20 25 30
Lys Gln Ala Thr Gln Gly Asp Cys Asn Ile Pro Val Pro Pro Ala Thr
35 40 45
Asp Val Lys Ala Lys Ala Lys Trp Glu Ala Trp Met Val Asn Lys Gly
50 55 60
Met Ser Lys Met Asp Ala Met Arg Ile Tyr Ile Ala Lys Val Glu Glu
65 70 75 80
Leu Lys Lys Asn Glu Thr Cys
85

<210> 161

<211> 80

<212> PRT

<213> Callithrix Jacchus

<400> 161

Leu Ala Arg Thr Ala Leu Lys Gln Leu Lys Gly Pro Leu Ser Asp Gln
1 5 10 15
Asp Lys Leu Leu Leu Tyr Gly Trp Tyr Lys Gln Ala Thr Arg Gly Asp
20 25 30
Cys His Leu Pro Ala Pro Pro Ala Ser Asp Leu Lys Ala Lys Ala Lys
35 40 45
Trp Glu Ala Trp Thr Ala Asn Gln Gly Leu Ser Arg Met Asp Ala Met
50 55 60
Arg Ala Tyr Val Ala Lys Val Glu Glu Leu Thr Arg Lys Glu Ala Gly
65 70 75 80

<210> 162

<211> 59

<212> PRT

<213> Macaca fascicularis

<400> 162

Leu Ala Arg Ala Ala Leu Lys Gln Leu Lys Gly Pro Val Ser Asp Pro
1 5 10 15
Glu Lys Leu Leu Ile Tyr Gly Leu Tyr Lys Gln Ala Thr Gln Gly Asp
20 25 30
Cys Gly Ile Pro Ala Pro Pro Ala Ser Asp Val Lys Ala Arg Ala Lys
35 40 45
Trp Glu Ala Trp Ser Ala Asn Lys Gly Val Ser
50 55

<210> 163

<211> 89

<212> PRT

<213> Homo sapiens

<400> 163

Leu Gln Glu Asp Phe Glu Ala Ala Ala Glu Lys Val Lys Lys Leu Lys
1 5 10 15
Lys Asn Gly Pro Val Lys Pro Ser Asn Glu Glu Lys Leu Lys Leu Tyr
20 25 30
Ser Leu Tyr Lys Gln Ala Thr Val Gly Asp Val Asn Thr Glu Arg Pro
35 40 45
Gly Met Phe Asp Leu Lys Gly Arg Ala Lys Trp Asp Ala Trp Asn Glu
50 55 60
Leu Lys Gly Met Ser Lys Glu Glu Ala Met Lys Ala Tyr Ile Ala Lys
65 70 75 80
Val Glu Glu Leu Ile Ala Lys Tyr Ala
85

<210> 164

<211> 77

<212> PRT

<213> Homo sapiens

<400> 164

Cys Ala Ala Leu Lys Gln Leu Lys Gly Pro Val Ser Asp Gln Glu Lys

1	5	10	15
Leu Leu Val Tyr Gly Leu Tyr Lys Gln Ala Thr Gln Gly Asp Cys Asp			
20	25	30	
Ile Pro Gly Pro Pro Ala Ser Asp Val Arg Ala Arg Ala Lys Trp Glu			
35	40	45	
Ala Trp Ser Ala Asn Lys Gly Ala Ser Lys Met Asp Ala Met Arg Gly			
50	55	60	
Tyr Ala Ala Lys Val Glu Glu Leu Thr Lys Lys Glu Val			
65	70	75	

<210> 165

<211> 330

<212> DNA

<213> Homo sapiens

<400> 165

acagaaggaa tgcctggaga gcagcaacag cccagctgcg gccaccatgt ccctgcaggc 60
 tgattttgac atggtcacag aagatgtgag gaagctgaaa acaagaccag atgatgaaga 120
 actgaaagaa ctttatgggc tttaaaaca agctgtaatt ggaaacatta atattgagtg 180
 ttcagaaatg ctagaattaa aaggcaaggc caaatgggaa gcacagaacc cccaaaaagg 240
 attgtcagag gaagatatga tgcgtgcctt tatttctaaa gccgaagagc tgatagaaaa 300
 atatggaatt tagaataaag catatgataa 330

<210> 166

<211> 88

<212> PRT

<213> Homo sapiens

<400> 166

Met Ser Leu Gln Ala Asp Phe Asp Met Val Thr Glu Asp Val Arg Lys			
1	5	10	15
Leu Lys Thr Arg Pro Asp Asp Glu Glu Leu Lys Glu Leu Tyr Gly Leu			
20	25	30	

Tyr Lys Gln Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met
 35 40 45
 Leu Glu Leu Lys Gly Lys Ala Lys Trp Glu Ala Gln Asn Pro Gln Lys
 50 55 60
 Gly Leu Ser Glu Glu Asp Met Met Arg Ala Phe Ile Ser Lys Ala Glu
 65 70 75 80
 Glu Leu Ile Glu Lys Tyr Gly Ile
 85

<210> 167

<211> 88

<212> PRT

<213> Mus musculus

<400> 167

Met Ser Leu Gln Ala Asp Phe Asp Gln Ala Ala Gln Asp Val Arg Lys
 1 5 10 15
 Leu Lys Ser Arg Pro Glu Asp Glu Glu Leu Lys Glu Leu Tyr Gly Leu
 20 25 30
 Tyr Lys Gln Ser Val Ile Gly Asp Ile Asn Ile Ala Cys Pro Ala Met
 35 40 45
 Leu Asp Leu Lys Gly Lys Ala Lys Cys Glu Ala Trp Asn Leu Gln Lys
 50 55 60
 Gly Leu Ser Lys Glu Asp Ala Met Cys Ala Tyr Ile Ser Lys Ala Arg
 65 70 75 80
 Glu Leu Ile Glu Lys Tyr Gly Ile
 85

<210> 168

<211> 88

<212> PRT

<213> laughing frog

<400> 168

Met Ser Pro Gln Ala Asp Phe Asp Lys Ala Ala Gly Asp Val Lys Lys
 1 5 10 15

Leu Lys Thr Lys Pro Thr Asp Asp Glu Leu Lys Glu Leu Tyr Gly Leu
 20 25 30
 Tyr Lys Gln Ser Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met
 35 40 45
 Leu Asp Leu Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Leu Lys Lys
 50 55 60
 Gly Leu Ser Lys Glu Asp Ala Met Ser Ala Tyr Val Ser Lys Ala His
 65 70 75 80
 Glu Leu Ile Glu Lys Tyr Gly Leu
 85

<210> 169

<211> 103

<212> PRT

<213> Anas platyrhynchos

<400> 169

Met Phe Gln Ala His Leu Leu Arg Gly Thr Leu Thr Leu Ser Phe Phe
 1 5 10 15
 Leu His Gln Ala Asp Phe Asp Glu Ala Ala Glu Glu Val Lys Lys Leu
 20 25 30
 Lys Thr Arg Pro Thr Asp Glu Glu Leu Lys Glu Leu Tyr Gly Phe Tyr
 35 40 45
 Lys Gln Ala Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met Leu
 50 55 60
 Asp Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Leu Lys Lys Gly
 65 70 75 80
 Ile Ser Lys Glu Asp Ala Met Asn Ala Tyr Ile Ser Lys Ala Lys Thr
 85 90 95
 Met Val Glu Lys Tyr Gly Ile
 100

<210> 170

<211> 87

<212> PRT

<213> Rana ridibunda

<400> 170

Ser Pro Gln Ala Asp Phe Asp Lys Ala Ala Gly Asp Val Lys Lys Leu
1 5 10 15
Lys Thr Lys Pro Thr Asp Asp Glu Leu Lys Glu Leu Tyr Gly Leu Tyr
20 25 30
Lys Gln Ser Thr Val Gly Asp Ile Asn Ile Glu Cys Pro Gly Met Leu
35 40 45
Asp Leu Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Leu Lys Lys Gly
50 55 60
Leu Ser Lys Glu Asp Ala Met Ser Ala Tyr Val Ser Lys Ala His Glu
65 70 75 80
Leu Ile Glu Lys Tyr Gly Leu
85

<210> 171

<211> 86

<212> PRT

<213> Homo sapiens

<400> 171

Ser Gln Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Arg His Leu Lys
1 5 10 15
Thr Lys Pro Ser Asp Glu Glu Met Leu Phe Ile Tyr Gly His Tyr Lys
20 25 30
Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu Asp
35 40 45
Phe Thr Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly Thr
50 55 60
Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu Glu Leu
65 70 75 80
Lys Lys Lys Tyr Gly Ile
85

<210> 172

<211> 89

<212> PRT

<213> Homo sapiens

<400> 172

Leu Gln Glu Asp Phe Glu Ala Ala Ala Glu Lys Val Lys Lys Leu Lys
1 5 10 15
Lys Asn Gly Pro Val Lys Pro Ser Asn Glu Glu Lys Leu Lys Leu Tyr
20 25 30
Ser Leu Tyr Lys Gln Ala Thr Val Gly Asp Val Asn Thr Glu Arg Pro
35 40 45
Gly Met Phe Asp Leu Lys Gly Arg Ala Lys Trp Asp Ala Trp Asn Glu
50 55 60
Leu Lys Gly Met Ser Lys Glu Glu Ala Met Lys Ala Tyr Ile Ala Lys
65 70 75 80
Val Glu Glu Leu Ile Ala Lys Tyr Ala
85

<210> 173

<211> 85

<212> PRT

<213> Homo sapiens

<400> 173

Leu Gln Ala Asp Phe Asp Met Val Thr Glu Asp Val Arg Lys Leu Lys
1 5 10 15
Thr Arg Pro Asp Asp Glu Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys
20 25 30
Gln Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met Leu Glu
35 40 45
Leu Lys Gly Lys Ala Lys Trp Glu Ala Gln Asn Pro Gln Lys Gly Leu
50 55 60
Ser Glu Glu Asp Met Met Arg Ala Phe Ile Ser Lys Ala Glu Glu Leu
65 70 75 80

Ile Glu Lys Tyr Gly
85

<210> 174

<211> 1049

<212> DNA

<213> Homo sapiens

<400> 174

```
taatggg'gcgc acaacatata aagatataat ttgtgacaat cacaacataa agtatgggca 60
gcgctgtata gagctataga gcagagattt ttgtatgcta tcaaagctaa atttggatca 120
atttaaacta ggttggtata aatttatgaa gttgattacc tctgtggtaa ccacttaaaa 180
tttttttaat ttttaattttt atttattttt tgagacggag tctcactctg tctctaaaaa 240
aagggtcaaga aaattagaag ggtattaaat gatacactac aaaaaaaaaat caatggaata 300
caaaagaagg cagtagtgga ggaaatgagg acaaaaaatg gtataagaca tacagaagga 360
atgcctggag agcagcaaca gccagctgc ggccaccatg tccctgcagg ctgattttga 420
catggtcaca gaagatgtga ggaagctgaa aacaagacca gatgatggag aactgaaaga 480
actctatggg ctttacaaac aagctgtaat tggaacatt aatattgagt gttcagaaat 540
gctagattta aaaggcaaag ccaaatggga agcatggaac ccccaaaaag gattgtcgac 600
ggaagatatg atgcgtgcct ttatttctaa agccgaagag ctgatagaaa aatatggaat 660
ttagaataaaa gcatatgata aattttcctt ttgaagcct tcataatggt atcatgacca 720
aacattttaga gttaacgctg ttaactctag gtatcatgta tatttttgct attattatga 780
attatactta attagtagta tgctaaaact gcatagttaa ctaaattgta cttgcttaaa 840
ccaggtgtct ttaaaagttc ttttagaaaa gtattttttt tatttttata gatttagggg 900
gtacaagtgc agttttgttg catgaacgta tcatgtagtg gtgaagtctg ggctttcagt 960
gtccccatca ccagatagtg ctacaattgt gcccaaaagg tacaattgta cattccttac 1020
accttctgtg accatgtcaa aatcagcct                                     1049
```

<210> 175

<211> 88

<212> PRT

<213> Homo sapiens

<400> 175

Met Ser Leu Gln Ala Asp Phe Asp Met Val Thr Glu Asp Val Arg Lys
1 5 10 15
Leu Lys Thr Arg Pro Asp Asp Gly Glu Leu Lys Glu Leu Tyr Gly Leu
20 25 30
Tyr Lys Gln Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met
35 40 45
Leu Asp Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Pro Gln Lys
50 55 60
Gly Leu Ser Thr Glu Asp Met Met Arg Ala Phe Ile Ser Lys Ala Glu
65 70 75 80
Glu Leu Ile Glu Lys Tyr Gly Ile
85

<210> 176

<211> 89

<212> PRT

<213> Homo sapiens

<400> 176

Leu Gln Glu Asp Phe Glu Ala Ala Ala Glu Lys Val Lys Lys Leu Lys
1 5 10 15
Lys Asn Gly Pro Val Lys Pro Ser Asn Glu Glu Lys Leu Lys Leu Tyr
20 25 30
Ser Leu Tyr Lys Gln Ala Thr Val Gly Asp Val Asn Thr Glu Arg Pro
35 40 45
Gly Met Phe Asp Leu Lys Gly Arg Ala Lys Trp Asp Ala Trp Asn Glu
50 55 60
Leu Lys Gly Met Ser Lys Glu Glu Ala Met Lys Ala Tyr Ile Ala Lys
65 70 75 80
Val Glu Glu Leu Ile Ala Lys Tyr Ala
85

<210> 177

<211> 85

<212> PRT

<213> Homo sapiens

<400> 177

Leu Gln Ala Asp Phe Asp Met Val Thr Glu Asp Val Arg Lys Leu Lys
1 5 10 15
Thr Arg Pro Asp Asp Gly Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys
20 25 30
Gln Ala Val Ile Gly Asn Ile Asn Ile Glu Cys Ser Glu Met Leu Asp
35 40 45
Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Pro Gln Lys Gly Leu
50 55 60
Ser Thr Glu Asp Met Met Arg Ala Phe Ile Ser Lys Ala Glu Glu Leu
65 70 75 80
Ile Glu Lys Tyr Gly
85

<210> 178

<211> 297

<212> DNA

<213> Homo sapiens

<400> 178

tcttccttaa ggctgatttt gacagggctg cagaagatgt gaggaagctg aaagcaagac 60
cagatgatgg agaactgaaa gaactctatg ggctttacaa acaagcaata gttggagaca 120
ttaatattgc gtgtccagga atgctagatt taaaaggcaa agccaaatgg gaagcatgga 180
acctcaaaaa agggttgtcg acggaagatg cgacgagtgc ctatatttct aaagcaaagg 240
agctgataga aaaatacgga atttagaata cagcatatga ggaatttttc cttttga 297

<210> 179

<211> 87

<212> PRT

<213> Homo sapiens

<400> 179

Phe Leu Lys Ala Asp Phe Asp Arg Ala Ala Glu Asp Val Arg Lys Leu
1 5 10 15
Lys Ala Arg Pro Asp Asp Gly Glu Leu Lys Glu Leu Tyr Gly Leu Tyr
20 25 30
Lys Gln Ala Ile Val Gly Asp Ile Asn Ile Ala Cys Pro Gly Met Leu
35 40 45
Asp Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Leu Lys Lys Gly
50 55 60
Leu Ser Thr Glu Asp Ala Thr Ser Ala Tyr Ile Ser Lys Ala Lys Glu
65 70 75 80
Leu Ile Glu Lys Tyr Gly Ile
85

<210> 180

<211> 89

<212> PRT

<213> Homo sapiens

<400> 180

Leu Gln Glu Asp Phe Glu Ala Ala Ala Glu Lys Val Lys Lys Leu Lys
1 5 10 15
Lys Asn Gly Pro Val Lys Pro Ser Asn Glu Glu Lys Leu Lys Leu Tyr
20 25 30
Ser Leu Tyr Lys Gln Ala Thr Val Gly Asp Val Asn Thr Glu Arg Pro
35 40 45
Gly Met Phe Asp Leu Lys Gly Arg Ala Lys Trp Asp Ala Trp Asn Glu
50 55 60
Leu Lys Gly Met Ser Lys Glu Glu Ala Met Lys Ala Tyr Ile Ala Lys
65 70 75 80
Val Glu Glu Leu Ile Ala Lys Tyr Ala
85

<210> 181

<211> 85

<212> PRT

<213> Homo sapiens

<400> 181

Leu Lys Ala Asp Phe Asp Arg Ala Ala Glu Asp Val Arg Lys Leu Lys
1 5 10 15
Ala Arg Pro Asp Asp Gly Glu Leu Lys Glu Leu Tyr Gly Leu Tyr Lys
20 25 30
Gln Ala Ile Val Gly Asp Ile Asn Ile Ala Cys Pro Gly Met Leu Asp
35 40 45
Leu Lys Gly Lys Ala Lys Trp Glu Ala Trp Asn Leu Lys Lys Gly Leu
50 55 60
Ser Thr Glu Asp Ala Thr Ser Ala Tyr Ile Ser Lys Ala Lys Glu Leu
65 70 75 80
Ile Glu Lys Tyr Gly
85

<210> 182

<211> 428

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (240)..(428)

<223> wherein n is a g or t

<400> 182

ttaatattgc tatattagtt ttgcaattga aaaattaagt tccaatagct tcctgctctg 60
tacctttctca gtgggctccc aggaatcctt gcaacaactg ccagtatgtc tcaggcggtt 120
gagaaagctg ccaaggatat taagcacctt gagaccaagc cagcagatga tgagaggatg 180
ttcatctaca gccgctgcaa acaagcgact gtgcatgact taaatacaga atggcccagg 240
atgttagacc tcaaaggcaa ggcaaagcag gatgctggna atgagctgaa agacactgcc 300
aaggaagatg ctgtgaaagc tgatatcaac aaagtagaag agcgaaataa aaaatacaga 360
atataagaga ttggatttgg ttgccagcan tgcatttaac ctaaactgat acaatgcctt 420

tttttccc

428

<210> 183

<211> 86

<212> PRT

<213> Homo sapiens

<400> 183

Met Ser Gln Ala Phe Glu Lys Ala Ala Lys Asp Ile Lys His Leu Glu
1 5 10 15
Thr Lys Pro Ala Asp Asp Glu Arg Met Phe Ile Tyr Ser Arg Cys Lys
20 25 30
Gln Ala Thr Val His Asp Leu Asn Thr Glu Trp Pro Arg Met Leu Asp
35 40 45
Leu Lys Gly Lys Ala Lys Gln Asp Ala Gly Asn Glu Leu Lys Asp Thr
50 55 60
Ala Lys Glu Asp Ala Val Lys Ala Asp Ile Asn Lys Val Glu Glu Arg
65 70 75 80
Asn Lys Lys Tyr Arg Ile
85

<210> 184

<211> 87

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
construct; chemically synthesized

<400> 184

Met Ser Gln Ala Glu Phe Asp Lys Ala Ala Glu Glu Val Lys His Leu
1 5 10 15
Lys Thr Lys Pro Ala Asp Glu Glu Met Leu Phe Ile Tyr Ser His Tyr
20 25 30

Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Met Leu
35 40 45

Asp Phe Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Glu Leu Lys Gly
50 55 60

Thr Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asp Lys Val Glu Glu
65 70 75 80

Leu Lys Lys Lys Tyr Gly Ile
85

<210> 185

<211> 87

<212> PRT

<213> Sus scrofa

<400> 185

Met Ser Gln Ala Glu Phe Glu Lys Ala Ala Glu Glu Val Lys Asn Leu
1 5 10 15

Lys Thr Lys Pro Ala Asp Asp Glu Met Leu Phe Ile Tyr Ser His Tyr
20 25 30

Lys Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Ile Leu
35 40 45

Asp Leu Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Gly Leu Lys Gly
50 55 60

Thr Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu Glu
65 70 75 80

Leu Lys Lys Lys Tyr Gly Ile
85

<210> 186

<211> 86

<212> PRT

<213> Canis familiaris

<400> 186

Ser Gln Ala Glu Phe Asp Lys Ala Ala Glu Asp Val Lys His Leu Lys
1 5 10 15

Thr Lys Pro Ala Asp Asp Glu Met Leu Tyr Ile Tyr Ser His Tyr Lys

	20		25		30
Gln	Ala	Thr	Val	Gly	Asp
	35				40
Asn	Thr	Glu	Arg	Pro	Gly
					45
Leu	Arg	Gly	Lys	Ala	Lys
	50				55
Trp	Asp	Ala	Trp	Asn	Gln
					60
Ser	Lys	Glu	Asp	Ala	Met
	65				70
Lys	Ala	Tyr	Val	Asn	Lys
					75
Val	Glu	Asp	Leu		
					80
Lys	Lys	Lys	Tyr	Gly	Ile
					85

<210> 187

<211> 86

<212> PRT

<213> Bos taurus

<400> 187

Ser	Gln	Ala	Glu	Phe	Asp	Lys	Ala	Ala	Glu	Glu	Val	Lys	His	Leu	Lys
1				5					10					15	
Thr	Lys	Pro	Ala	Asp	Glu	Glu	Met	Leu	Phe	Ile	Tyr	Ser	His	Tyr	Lys
			20					25					30		
Gln	Ala	Thr	Val	Gly	Asp	Ile	Asn	Thr	Glu	Arg	Pro	Gly	Met	Leu	Asp
	35						40						45		
Phe	Lys	Gly	Lys	Ala	Lys	Trp	Asp	Ala	Trp	Asn	Glu	Leu	Lys	Gly	Thr
	50					55					60				
Ser	Lys	Glu	Asp	Ala	Met	Lys	Ala	Tyr	Ile	Asp	Lys	Val	Glu	Glu	Leu
	65				70					75					80
Lys	Lys	Lys	Tyr	Gly	Ile										
					85										

<210> 188

<211> 86

<212> PRT

<213> Sus scrofa

<400> 188

Ser	Gln	Ala	Glu	Phe	Glu	Lys	Ala	Ala	Glu	Glu	Val	Lys	Asn	Leu	Lys
1				5					10					15	

Thr Lys Pro Ala Asp Asp Glu Met Leu Phe Ile Tyr Ser His Tyr Lys
 20 25 30
 Gln Ala Thr Val Gly Asp Ile Asn Thr Glu Arg Pro Gly Ile Leu Asp
 35 40 45
 Leu Lys Gly Lys Ala Lys Trp Asp Ala Trp Asn Gly Leu Lys Gly Thr
 50 55 60
 Ser Lys Glu Asp Ala Met Lys Ala Tyr Ile Asn Lys Val Glu Glu Leu
 65 70 75 80
 Lys Lys Lys Tyr Gly Ile
 85

<210> 189

<211> 89

<212> PRT

<213> Homo sapiens

<400> 189

Leu Gln Glu Asp Phe Glu Ala Ala Ala Glu Lys Val Lys Lys Leu Lys
 1 5 10 15
 Lys Asn Gly Pro Val Lys Pro Ser Asn Glu Glu Lys Leu Lys Leu Tyr
 20 25 30
 Ser Leu Tyr Lys Gln Ala Thr Val Gly Asp Val Asn Thr Glu Arg Pro
 35 40 45
 Gly Met Phe Asp Leu Lys Gly Arg Ala Lys Trp Asp Ala Trp Asn Glu
 50 55 60
 Leu Lys Gly Met Ser Lys Glu Glu Ala Met Lys Ala Tyr Ile Ala Lys
 65 70 75 80
 Val Glu Glu Leu Ile Ala Lys Tyr Ala
 85

<210> 190

<211> 85

<212> PRT

<213> Homo sapiens

<400> 190

Met	Ser	Gln	Ala	Phe	Glu	Lys	Ala	Ala	Lys	Asp	Ile	Lys	His	Leu	Glu
1				5					10					15	
Thr	Lys	Pro	Ala	Asp	Asp	Glu	Arg	Met	Phe	Ile	Tyr	Ser	Arg	Cys	Lys
			20					25					30		
Gln	Ala	Thr	Val	His	Asp	Leu	Asn	Thr	Glu	Trp	Pro	Arg	Met	Leu	Asp
		35					40					45			
Leu	Lys	Gly	Lys	Ala	Lys	Gln	Asp	Ala	Gly	Asn	Glu	Leu	Lys	Asp	Thr
	50					55					60				
Ala	Lys	Glu	Asp	Ala	Val	Lys	Ala	Asp	Ile	Asn	Lys	Val	Glu	Glu	Arg
	65				70					75					80
Asn	Lys	Lys	Tyr	Arg											
				85											

<210> 191

<211> 1979

<212> DNA

<213> Homo sapiens

<400> 191

agtaggaagc cgcggggttg tggcgagaga ggaccaggt gtcctagcag tgggcgccgc 60
ggggcacacg ctgggccaaag gtgcaggcgg ccagggtggg agactgttcg ccccgccctg 120
agtactccta tcttgtttct ccacctgttc gggagttgga gatgtgcacc taaaggaggc 180
gcatctgggg acggacacat ctggcactga ggccctcgcc acctgcctcg ccacctggcg 240
acctgaccc caccacactg ccttgaggta ggaaaaggag gtcctcaac cacaacttct 300
gacctccag ggtgtctgag gcctctaaag agcttagttt gcccctctgg gaagtgaatc 360
cttggcttat ggtgccgggg ggacctgga ggccccctca cacgaaggct gcttcttgca 420
gagtcgctca aaagtagggc ccaggggctc gcagcagcat gggcaccgag aaagaaagcc 480
cagagcccga ctgccagaaa cagttccagg ctgcagttag cgtcatccag aacctgccc 540
agaacggttc ttaccgcccc tctatgaag agatgctgcg attctacagt tactacaagc 600
aggccacat ggggccctgc ctggtcccc ggcccgggtt ctgggacccc attggacgat 660
ataagtggga cgctggaac agtctgggca agatgagcag ggaggaggcc atgtctgcct 720

acatcactga aatgaaactg gtggcacaga aggtgatcga cacagtgcc ctgggtgagg 780
 tggcagagga catgttttgt tacttcgagc ccctgtacca ggtgatccct gacatgccga 840
 ggccccaga gaccttcctg agaaggggtca caggttgga agagcaggtt gtgaatggag 900
 atgttggggc tgtttcagag cctccctgcc tccccaaaga accggcaccc ccaagcccag 960
 agtcccattc acccagggac ctggactccg aggttttctg tgattccctg gagcagctgg 1020
 agcctgagct ggtttgaca gagcagcggg cagcatctgg aggaaagcgt gatcccagga 1080
 acagccccgt gccccccaca aagaaagagg ggttgcgggg cagcccgccg gggccccagg 1140
 agttggacgt gtggctgctg gggacagttc gagcactaca ggagagcatg caggaggtgc 1200
 aggcgagggg gcagagcctg gagagcatgc cccggccccc tgagcagagg ccgcagccca 1260
 ggcccagtgc tcggccatgg ccccttgggc tcccgggggc cgcgctgctc ttcttcctcc 1320
 tgtggccctt cgtcgtccag tggtctctcc gaatgtttcg gacccaaaag aggtgactgt 1380
 cagtggaggg gtctctgcag ccaactgaga ctatcttctg gtgccctgag ccttcctagg 1440
 gtttagaaga acagcattca aaattccccg tctgtcagt gtttgccttc gcacctctc 1500
 ccctaaagca gcgcgggggg caaataagac cccaccctc cctgcagctt cacagggacg 1560
 cttccttccc tccccgaac caccacaggc tccctggga ggctgcagtt gtggtacacg 1620
 tccccggtgc tgggttgcc gtgactcggg ggcggggcga tcgggtctca gccctgcct 1680
 tccccagtct ctgggtcacc cgaattttcc caccctgct tctccccgag gaggttgagc 1740
 tcttgagcaa gttgggactt gggctggggc ctggaagaat gattggctgg gaggccgcgg 1800
 gagggaggcc agggaggccg gaccagttgg gaggagttag caggccccgg gggaggggga 1860
 tgagcgcagt ttgctcgtt tctccctg ccggccccc cgcccccac acacactcgg 1920
 gacgtcttca ttgaagattc acttaciaaag gaatgtttca ctaaataaaa gaaaaccag 1979

<210> 192

<211> 305

<212> PRT

<213> Homo sapiens

<400> 192

Met	Gly	Thr	Glu	Lys	Glu	Ser	Pro	Glu	Pro	Asp	Cys	Gln	Lys	Gln	Phe
1				5					10					15	

Gln Ala Ala Val Ser Val Ile Gln Asn Leu Pro Lys Asn Gly Ser Tyr

20					25					30						
Arg	Pro	Ser	Tyr	Glu	Glu	Met	Leu	Arg	Phe	Tyr	Ser	Tyr	Tyr	Lys	Gln	
35					40					45						
Ala	Thr	Met	Gly	Pro	Cys	Leu	Val	Pro	Arg	Pro	Gly	Phe	Trp	Asp	Pro	
50					55					60						
Ile	Gly	Arg	Tyr	Lys	Trp	Asp	Ala	Trp	Asn	Ser	Leu	Gly	Lys	Met	Ser	
65					70					75					80	
Arg	Glu	Glu	Ala	Met	Ser	Ala	Tyr	Ile	Thr	Glu	Met	Lys	Leu	Val	Ala	
85					90					95						
Gln	Lys	Val	Ile	Asp	Thr	Val	Pro	Leu	Gly	Glu	Val	Ala	Glu	Asp	Met	
100					105					110						
Phe	Gly	Tyr	Phe	Glu	Pro	Leu	Tyr	Gln	Val	Ile	Pro	Asp	Met	Pro	Arg	
115					120					125						
Pro	Pro	Glu	Thr	Phe	Leu	Arg	Arg	Val	Thr	Gly	Trp	Lys	Glu	Gln	Val	
130					135					140						
Val	Asn	Gly	Asp	Val	Gly	Ala	Val	Ser	Glu	Pro	Pro	Cys	Leu	Pro	Lys	
145					150					155					160	
Glu	Pro	Ala	Pro	Pro	Ser	Pro	Glu	Ser	His	Ser	Pro	Arg	Asp	Leu	Asp	
165					170					175						
Ser	Glu	Val	Phe	Cys	Asp	Ser	Leu	Glu	Gln	Leu	Glu	Pro	Glu	Leu	Val	
180					185					190						
Trp	Thr	Glu	Gln	Arg	Ala	Ala	Ser	Gly	Gly	Lys	Arg	Asp	Pro	Arg	Asn	
195					200					205						
Ser	Pro	Val	Pro	Pro	Thr	Lys	Lys	Glu	Gly	Leu	Arg	Gly	Ser	Pro	Pro	
210					215					220						
Gly	Pro	Gln	Glu	Leu	Asp	Val	Trp	Leu	Leu	Gly	Thr	Val	Arg	Ala	Leu	
225					230					235					240	
Gln	Glu	Ser	Met	Gln	Glu	Val	Gln	Ala	Arg	Val	Gln	Ser	Leu	Glu	Ser	
245					250					255						
Met	Pro	Arg	Pro	Pro	Glu	Gln	Arg	Pro	Gln	Pro	Arg	Pro	Ser	Ala	Arg	
260					265					270						
Pro	Trp	Pro	Leu	Gly	Leu	Pro	Gly	Pro	Ala	Leu	Leu	Phe	Phe	Leu	Leu	
275					280					285						
Trp	Pro	Phe	Val	Val	Gln	Trp	Leu	Phe	Arg	Met	Phe	Arg	Thr	Gln	Lys	
290					295					300						
Arg																
305																

<210> 193

<211> 305

<212> PRT

<213> Homo sapiens

<400> 193

Met	Gly	Thr	Glu	Lys	Glu	Ser	Pro	Glu	Pro	Asp	Cys	Gln	Lys	Gln	Phe
1				5					10					15	
Gln	Ala	Ala	Val	Ser	Val	Ile	Gln	Asn	Leu	Pro	Lys	Asn	Gly	Ser	Tyr
			20					25					30		
Arg	Pro	Ser	Tyr	Glu	Glu	Met	Leu	Arg	Phe	Tyr	Ser	Tyr	Tyr	Lys	Gln
		35					40					45			
Ala	Thr	Met	Gly	Pro	Cys	Leu	Val	Pro	Arg	Pro	Gly	Phe	Trp	Asp	Pro
	50					55					60				
Ile	Gly	Arg	Tyr	Lys	Trp	Asp	Ala	Trp	Asn	Ser	Leu	Gly	Lys	Met	Ser
65					70					75					80
Arg	Glu	Glu	Ala	Met	Ser	Ala	Tyr	Ile	Thr	Glu	Met	Lys	Leu	Val	Ala
				85					90					95	
Gln	Lys	Val	Ile	Asp	Thr	Val	Pro	Leu	Gly	Glu	Val	Ala	Glu	Asp	Met
		100						105						110	
Phe	Gly	Tyr	Phe	Glu	Pro	Leu	Tyr	Gln	Val	Ile	Pro	Asp	Met	Pro	Arg
	115						120					125			
Pro	Pro	Glu	Thr	Phe	Leu	Arg	Arg	Val	Thr	Gly	Trp	Lys	Glu	Gln	Val
	130					135					140				
Val	Asn	Gly	Asp	Val	Gly	Ala	Val	Ser	Glu	Pro	Pro	Cys	Leu	Pro	Lys
145					150					155					160
Glu	Pro	Ala	Pro	Pro	Ser	Pro	Glu	Ser	His	Ser	Pro	Arg	Asp	Leu	Asp
			165						170					175	
Ser	Glu	Val	Phe	Cys	Asp	Ser	Leu	Glu	Gln	Leu	Glu	Pro	Glu	Leu	Val
		180						185					190		
Trp	Thr	Glu	Gln	Arg	Ala	Ala	Ser	Gly	Gly	Lys	Arg	Asp	Pro	Arg	Asn
	195						200					205			
Ser	Pro	Val	Pro	Pro	Thr	Lys	Lys	Glu	Gly	Leu	Arg	Gly	Ser	Pro	Pro
	210					215					220				
Gly	Pro	Gln	Glu	Leu	Asp	Val	Trp	Leu	Leu	Gly	Thr	Val	Arg	Ala	Leu
225					230					235					240

Gln Glu Ser Met Gln Glu Val Gln Ala Arg Val Gln Ser Leu Glu Ser
245 250 255

Met Pro Arg Pro Pro Glu Gln Arg Pro Gln Pro Arg Pro Ser Ala Arg
260 265 270

Pro Trp Pro Leu Gly Leu Pro Gly Pro Ala Leu Leu Phe Phe Leu Leu
275 280 285

Trp Pro Phe Val Val Gln Trp Leu Phe Arg Met Phe Arg Thr Gln Lys
290 295 300

Arg
305

<210> 194

<211> 533

<212> PRT

<213> Bos taurus

<400> 194

Met Phe Gln Phe His Ala Gly Ser Trp Glu Ser Trp Cys Cys Cys Cys
1 5 10 15

Cys Leu Ile Pro Gly Asp Arg Pro Trp Asp Arg Gly Arg Arg Trp Arg
20 25 30

Leu Glu Met Arg His Thr Arg Ser Val His Glu Thr Arg Phe Glu Ala
35 40 45

Ala Val Lys Val Ile Gln Ser Leu Pro Lys Asn Gly Ser Phe Gln Pro
50 55 60

Thr Asn Glu Met Met Leu Lys Phe Tyr Ser Phe Tyr Lys Gln Ala Thr
65 70 75 80

Glu Gly Pro Cys Lys Leu Ser Lys Pro Gly Phe Trp Asp Pro Val Gly
85 90 95

Arg Tyr Lys Trp Asp Ala Trp Ser Ser Leu Gly Asp Met Thr Lys Glu
100 105 110

Glu Ala Met Ile Ala Tyr Val Glu Glu Met Lys Lys Ile Leu Glu Thr
115 120 125

Met Pro Met Thr Glu Lys Val Glu Glu Leu Leu His Val Ile Gly Pro
130 135 140

Phe Tyr Glu Ile Val Glu Asp Lys Lys Ser Gly Arg Ser Ser Asp Leu
145 150 155 160

Thr Ser Val Arg Leu Glu Lys Ile Ser Lys Cys Leu Glu Asp Leu Gly
 165 170 175
 Asn Val Leu Ala Ser Thr Pro Asn Ala Lys Thr Val Asn Gly Lys Ala
 180 185 190
 Glu Ser Ser Asp Ser Gly Ala Glu Ser Glu Glu Glu Ala Ala Gln Glu
 195 200 205
 Asp Pro Lys Arg Pro Glu Pro Arg Asp Ser Asp Lys Lys Met Met Lys
 210 215 220
 Lys Ser Ala Asp His Lys Asn Leu Glu Ile Ile Val Thr Asn Gly Tyr
 225 230 235 240
 Asp Lys Asp Ser Phe Val Gln Gly Val Gln Asn Ser Ile His Thr Ser
 245 250 255
 Pro Ser Leu Asn Gly Arg Cys Thr Glu Glu Val Lys Ser Val Asp Glu
 260 265 270
 Asn Leu Glu Gln Thr Gly Lys Thr Val Val Phe Val His Gln Asp Val
 275 280 285
 Asn Ser Asp His Val Glu Asp Ile Ser Gly Ile Gln His Leu Thr Ser
 290 295 300
 Asp Ser Asp Ser Glu Val Tyr Cys Asp Ser Met Glu Gln Phe Gly Gln
 305 310 315 320
 Glu Glu Ser Leu Asp Gly Phe Ile Ser Asn Asn Gly Pro Phe Ser Tyr
 325 330 335
 Tyr Leu Gly Gly Asn Pro Ser Gln Pro Leu Glu Ser Ser Gly Phe Pro
 340 345 350
 Glu Ala Val Gln Gly Leu Pro Gly Asn Gly Ser Pro Glu Asp Met Gln
 355 360 365
 Gly Ala Val Val Glu Gly Lys Gly Glu Val Lys Arg Gly Gly Glu Asp
 370 375 380
 Gly Gly Ser Asn Ser Gly Ala Pro His Arg Glu Lys Arg Ala Gly Glu
 385 390 395 400
 Ser Glu Glu Phe Ser Asn Ile Arg Arg Gly Arg Gly His Arg Met Gln
 405 410 415
 His Leu Ser Glu Gly Ser Lys Gly Arg Gln Val Gly Ser Gly Gly Asp
 420 425 430
 Gly Glu Arg Trp Gly Ser Asp Arg Gly Ser Arg Gly Ser Leu Asn Glu
 435 440 445
 Gln Ile Ala Leu Val Leu Met Arg Leu Gln Glu Asp Met Gln Asn Val
 450 455 460

Leu Gln Arg Leu His Lys Leu Glu Met Leu Ala Ala Ser Gln Ala Lys
 465 470 475 480

Ser Ser Ala Leu Gln Thr Ser Asn Gln Pro Thr Ser Pro Arg Pro Ser
 485 490 495

Trp Trp Pro Phe Glu Met Ser Pro Gly Ala Leu Thr Phe Ala Ile Ile
 500 505 510

Trp Pro Phe Ile Ala Gln Trp Leu Val His Leu Tyr Tyr Gln Arg Arg
 515 520 525

Arg Arg Lys Leu Asn
 530

<210> 195

<211> 195

<212> PRT

<213> Homo sapiens

<400> 195

Met Asn Arg Thr Ala Met Arg Ala Ser Gln Lys Asp Phe Glu Asn Ser
 1 5 10 15

Met Asn Gln Val Lys Leu Leu Lys Lys Asp Pro Gly Asn Glu Val Lys
 20 25 30

Leu Lys Leu Tyr Ala Leu Tyr Lys Gln Ala Thr Glu Gly Pro Cys Asn
 35 40 45

Met Pro Lys Pro Gly Val Phe Asp Leu Ile Asn Lys Ala Lys Trp Asp
 50 55 60

Ala Trp Asn Ala Leu Gly Ser Leu Pro Lys Glu Ala Ala Arg Gln Asn
 65 70 75 80

Tyr Val Asp Leu Val Ser Ser Leu Ser Pro Ser Leu Glu Ser Ser Ser
 85 90 95

Gln Val Glu Pro Gly Thr Asp Arg Lys Ser Thr Gly Phe Glu Thr Leu
 100 105 110

Val Val Thr Ser Glu Asp Gly Ile Thr Lys Ile Met Phe Asn Arg Pro
 115 120 125

Lys Lys Lys Asn Ala Ile His Thr Glu Met Tyr His Glu Ile Met Arg
 130 135 140

Ala Leu Lys Ala Ala Ser Lys Asp Asp Ser Ile Ile Thr Val Leu Thr
 145 150 155 160

Gly Asn Gly Asp Tyr Tyr Ser Ser Gly Asn Asp Leu Thr Asn Phe Thr
165 170 175

Asp Ile Pro Pro Gly Gly Val Glu Glu Lys Ala Lys Asn Asn Ala Val
180 185 190

Leu Leu Arg
195

<210> 196

<211> 89

<212> PRT

<213> Homo sapiens

<400> 196

Leu Gln Glu Asp Phe Glu Ala Ala Ala Glu Lys Val Lys Lys Leu Lys
1 5 10 15

Lys Asn Gly Pro Val Lys Pro Ser Asn Glu Glu Lys Leu Lys Leu Tyr
20 25 30

Ser Leu Tyr Lys Gln Ala Thr Val Gly Asp Val Asn Thr Glu Arg Pro
35 40 45

Gly Met Phe Asp Leu Lys Gly Arg Ala Lys Trp Asp Ala Trp Asn Glu

50 55 60
Leu Lys Gly Met Ser Lys Glu Glu Ala Met Lys Ala Tyr Ile Ala Lys
65 70 75 80

Val Glu Glu Leu Ile Ala Lys Tyr Ala
85

<210> 197

<211> 88

<212> PRT

<213> Homo sapiens

<400> 197

Cys Gln Lys Gln Phe Gln Ala Ala Val Ser Val Ile Gln Asn Leu Pro

1	5	10	15
Lys Asn Gly Ser Tyr Arg Pro Ser Tyr Glu Glu Met Leu Arg Phe Tyr	20	25	30
Ser Tyr Tyr Lys Gln Ala Thr Met Gly Pro Cys Leu Val Pro Arg Pro	35	40	45
Gly Phe Trp Asp Pro Ile Gly Arg Tyr Lys Trp Asp Ala Trp Asn Ser	50	55	60
Leu Gly Lys Met Ser Arg Glu Glu Ala Met Ser Ala Tyr Ile Thr Glu	65	70	75
Met Lys Leu Val Ala Gln Lys Val	85		

<210> 198

<211> 20

<212> PRT

<213> Homo sapiens

<400> 198

Gln Ala Thr Met Gly Pro Cys Leu Val Pro Arg Pro Gly Phe Trp Asp	1	5	10	15
Pro Ile Gly Arg	20			

<210> 199

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
construct; chemically synthesized

<400> 199

ataagacata cagaaggaat gcctgga

27

<210> 200

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
construct; chemically synthesized

<400> 200

tataagacat acagaaggaa tgcctgg

27

<210> 201

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
construct; chemically synthesized

<400> 201

ggtaggtaaata gctccttttg tttgttt

27

<210> 202

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
construct; chemically synthesized

*B¹
cut*
<400> 202

acatcaagtt aacagtatgc ctctccc

27

TRA 1736116v1
